

Sustainable Region Showcase for Greater Vancouver

May 2003



TRANS LINK
Greater Vancouver Transportation Authority

**Greater
Vancouver
Regional
District**



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May 16, 2003

Urban Transportation Showcase Program
Transport Canada
Ottawa, Ontario K1A 0N5

Dear Selection Committee Members:

We are very pleased to have been selected as one of the finalists for the Transport Canada Urban Transportation Showcase Program.

Our organizations, the Greater Vancouver Transportation Authority (GVTA) and the Greater Vancouver Regional District (GVRD), and our partners, have worked very hard over the past few months to put forward an innovative Showcase proposal for the Vancouver metropolitan region, called the *Sustainable Region Showcase*. Our proposal makes the vital connections between transportation, land use, air quality and greenhouse gas emissions and relies on partnership building among all three levels of government and the private and non-profit sectors. The combination of partners allows the project to be comprehensive in geography, jurisdiction, and application.

The GVTA is the lead agency in the *Showcase* proposal and is responsible for the integrated planning and management of the regional transportation network. The GVRD is the regional agency partner and oversees growth management and air quality in the region. The member municipalities of the Cities of Burnaby, Coquitlam, Delta, Richmond, New Westminster and Vancouver are all partners and together make up 1.5 million of the region's 2 million population.

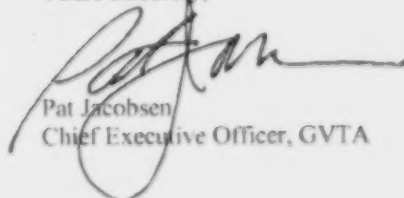
The Urban Transportation Showcase Program is timely for the Vancouver region. The GVTA is preparing a new long-term transportation plan and the GVRD is reviewing its Livable Region Strategic Plan. In 2002, the GVRD Board launched the Sustainable Region Initiative, which is exploring opportunities to advance sustainability in the region in plans, policies, and actions.

The *Sustainable Region Showcase* recognizes that progress toward sustainable transportation requires the effective combination of a number of mutually reinforcing policies and actions in transportation supply/demand, land use, and travel behaviour. Projects aimed at increasing transit priority, goods movement efficiency, improving pedestrian safety and amenity, experimenting with household-based trip reduction strategies, piloting technological improvements such as hybrid buses, providing cycle facilities and encouraging transit oriented development are all included in the proposal.

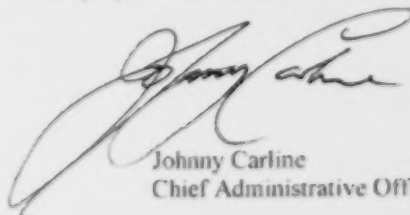
The *Sustainable Region Showcase* proposal represents a transportation investment package with a cost of approximately \$35 million. A Transport Canada share of \$10 million will lever an additional \$25 million from the GVTA, GVRD, member municipalities, and the non-profit and private sectors. We are confident that the projects developed in our region could easily be replicated elsewhere in Canada and that your program will lead to innovative approaches to advancing sustainable transportation across the country.

We are very proud of the calibre of our Showcase proposal and we look forward to presenting it to you.

Yours sincerely,



Pat Jacobsen
Chief Executive Officer, GVTA



Johnny Carline
Chief Administrative Officer, GVRD

Acknowledgements

The *Sustainable Region Showcase for Greater Vancouver* is an initiative of the Greater Vancouver Transportation Authority (TransLink) and the Greater Vancouver Regional District. This proposal would not have been possible without the endorsements and dedicated work effort provided by the numerous elected representatives and staff of all of the following agencies. We would in particular like to thank the following people for lending their support and energy to developing the proposal.

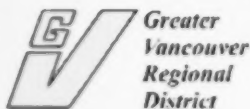
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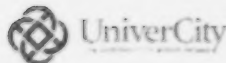


Greater Vancouver Regional District

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City of Vancouver

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Patrick Condon, UBC James Taylor Chair in Landscape and Liveable Environments

SUMMARY OF SUSTAINABLE REGION SHOWCASE



Greater Vancouver proposes to reduce its greenhouse gas emissions from transportation through an integrated package of measures in support of its coordinated approach to land use and transportation planning. Two regional authorities, the Greater Vancouver Transportation Authority (GVTA) and Greater Vancouver Regional District (GVRD) have created a partnership with seven municipalities in the region, as well as with the voluntary and private sectors, to develop this proposal.

This *Sustainable Region Showcase* proposal combines six separate elements in an integrated package of urban transportation measures that addresses some of the most challenging aspects of greenhouse gas reduction in urban regions across Canada. Transportation sources create approximately 40% of total GHG emissions in the Vancouver region. Encouraging sustainable transportation choices will make an important contribution to emission reductions and meeting national, provincial and local GHG targets.

The proposal recognizes that progress toward sustainable transportation requires the effective combination of a number of mutually reinforcing policies and actions in transportation supply and demand, land use, and travel behaviour. In other words, there is no silver bullet to the complex challenge of more sustainable transportation. Projects aimed at increasing transit priority and goods movement efficiency, improving pedestrian safety and amenity, experimenting with household-

based trip reduction strategies, piloting technological improvements such as hybrid buses, providing cycle facilities and encouraging transit oriented development are all included in the proposal.

The *Sustainable Region Showcase* proposal represents a transportation investment package with a cost of approximately \$35 million. A Transport Canada share of \$10 million will lever an additional \$25 million from the GVTA, GVRD, member municipalities and the voluntary and private sectors.

All of the projects are replicable in other cities, large and small, across Canada. The broad representation of partners lends the project comprehensiveness in geography, jurisdiction, and application. The GVTA will take the lead as transportation service provider, the GVRD brings the regional growth management elements and air quality monitoring responsibilities, and local municipalities will provide the "on the ground" implementation of most infrastructure elements in their localities. Participation from the non-profit sector with Better Environmentally Sound Transportation, and the private sector with VanCity Credit Union and Simon Fraser University Community Trust, as well as from residents through TravelSmart all help expand the range of constituents actively working to tackle Canada's pressing need to advance sustainable transportation.

SUSTAINABLE REGION SHOWCASE PACKAGE

Project	Description
Main Street Corridor Transit and Pedestrian Priority	Comprehensive transit priority measures and transit passenger amenity improvements on one of the highest volume local bus routes in the region.
Hybrid Bus Demonstration	Testing the viability of low emission, low noise diesel/electric buses in Greater Vancouver.
Central Valley Greenway	A predominantly traffic-separated 22 km bicycle and pedestrian pathway through three municipalities (New Westminster, Burnaby and Vancouver) in the centre of the Greater Vancouver Region.
Transit Villages	Increasing transit-oriented development, improving the physical environment and enhancing foot, bike and bus accessibility in SkyTrain station areas.
Goods Movement	Undertake detailed studies and analysis to examine opportunities for improving the efficiency of goods movement in the region, while reducing greenhouse gas emissions.
TravelSmart	Residence-based travel marketing program targeting households willing to try alternatives modes.

SUSTAINABLE REGION SHOWCASE OVERVIEW



Introduction

The *Sustainable Region Showcase* for Greater Vancouver takes place within the jurisdictional boundaries of the Greater Vancouver Regional District (GVRD), a partnership of 21 municipalities and one electoral area. The current population of the GVRD is just over 2 million. During the 1990s the region had the highest growth rate among metropolitan regions in Canada and the population is forecast to grow to 2.8 million by 2021. Approximately one half of British Columbia's total population and jobs are located in the GVRD. Greater Vancouver is Canada's Gateway to the Pacific Rim, with excellent airport, seaport, and road and rail infrastructure.

Greater Vancouver has an area of 300,000 hectares. To some extent, geography helps contain the spread of urban development with the American border to the south, the Coastal Mountains to the north, and the Strait of Georgia to the west. The Fraser River weaves through the region and provides an enormous ecological asset, but at the same time presents a challenge in providing transportation. Avoiding costly transportation infrastructure, such as additional road capacity or bridges has been one of the key concepts in shaping the region's growth management strategy. The jurisdictional boundaries for GVRD and GVTA include the entire commuter shed. Regional land use and transportation planning which addresses the entire commuter shed helps avoid many of the problems experienced in other metropolitan areas, where there are multiple transportation providers and jurisdictions.

How we travel in the Greater Vancouver Region

The most recent travel information from a 1999 Trip Diary survey (see chart right) shows that Greater Vancouver residents make about 5.5 million trips per day. Just under 25% of these trips are taken by transit, foot and bike, while 75% are taken by car. The objective of this Showcase is to increase the transit/walk/ bike trips with a corresponding reduction in private vehicle trips. For example, an increase to a mode split of 33% by transit/walk/bike could result in an annual reduction of 400,000 metric tonnes of GHG.

What is the GVRD?

The Greater Vancouver Regional District is a federation of 21 municipalities and one electoral area. The GVRD is dedicated the maintenance of quality of life in the Greater Vancouver area and to the delivery of region-wide essential services. Such services include the cost-effective delivery of water, sewerage and drainage, and solid waste management utilities. Other services include the delivery of various activities relating to environmental stewardship and the livability of the region, such as air quality, regional parks and housing. It also has financial and planning oversight responsibilities for the Greater Vancouver Transportation Authority. Its 35 member Board is made up of representatives appointed from each of the municipal councils in the region.

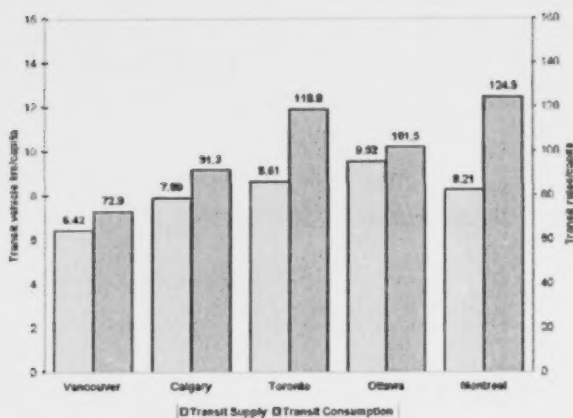
What is the GVTA?

The Greater Vancouver Transportation Authority (also known as TransLink) was created in 1999. It is responsible for planning, financing and operating a regional transportation system that moves people and goods efficiently, and supports the regional growth strategy, air quality objectives and economic development of the GVRD. Its subsidiary companies operate the region's buses, SeaBus, SkyTrain, West Coast Express commuter rail, Albion (car) Ferries, HandyDart (services for those with disabilities) and AirCare, a vehicle emissions testing program. The GVTA partners with municipalities to plan and fund roads, bridges and bicycle facilities. It also funds contractor provided trip reduction and carpool/vanpool programs. The GVTA has a 15 member Board, with 12 appointed by the GVRD annually, and three appointed by the Province of BC (currently not appointed).

Greater Vancouver, 24-hour Mode of Travel, Total Number of Trips Daily

Mode of Travel	Number of trips	Percentage
Auto driver	3,127,600	57.1%
Auto passenger	935,300	17.1%
Transit	566,200	10.3%
Walk/bike	783,500	14.3%
Other	65,800	1.2%
Total	5,478,100	100.0%

(Source: 1999 Trip Diary Survey, GVTA)



Greater Vancouver has the lowest transit supply and ridership per capita of any major Canadian region. Source: Transportation Association of Canada, 1999.

Compared to other major Canadian urban regions, Greater Vancouver residents currently make less use of transit. According to a Transportation Association of Canada Study (1999), Vancouver region residents made on average 73 transit rides per capita annually, while Ottawa residents made approximately 100 rides per capita and Toronto and Montreal residents made approximately 120 rides per capita annually. Many of the modules in the *Sustainable Region Showcase* are specifically aimed at increasing transit use.

Guiding Principles

The *Sustainable Region Showcase* is an integrated package of urban transportation measures designed around the following nine key principles:

Demonstrating Innovative Approaches

Under the umbrella of the GVRD's Sustainable Region Initiative (SRI), strategic land use and transportation planning policies and actions will be put through an evaluation framework that assesses social, economic, and environmental criteria. The proposal recognizes the need for mutually reinforcing measures to change travel behaviour (push and pull factors), along with complementary land use and transportation infrastructure planning.

Building on Institutional Structures

With the GVTA and the GVRD, the Vancouver region has the institutional capability to deliver a Showcase Program that integrates transportation, land use, and air quality.

Creating Models that can be Replicated

Careful documentation of the development and

progress of the program will provide models for adaptation of the projects, as a whole or in parts, elsewhere in Canada.

Improving on Traditional Public Involvement Models

Traditional public involvement has been focused on the belief that education would lead to changes in travel behaviour. Public opinion polls have often been used to gauge community attitudes. Experience in this region (and elsewhere) shows that these techniques do not lead to significant, permanent behavioural change. In the *Sustainable Region Showcase*, we are proposing to work toward much more specific and participatory models. This participatory framework is consistent with sustainability principles and positions citizens as partners in identifying problems and solutions.

Building on Past Experience and Studies

The GVRD's Livable Region Strategic Plan (1996) and Transport 2021 (1993) were acknowledged across Canada as being in the forefront of strategic land use and transportation planning. Transport 2021 was one of the first Canadian plans to explicitly acknowledge the importance of coordinating land use, transportation supply and transportation demand management to achieve the region's livability objectives. Similarly, the GVRD's leadership in air quality expertise is widely recognized. The review of these plans under the SRI will build on this base of knowledge and expertise.

Focusing on Greenhouse Gas Emission Reductions and Air Quality Improvements

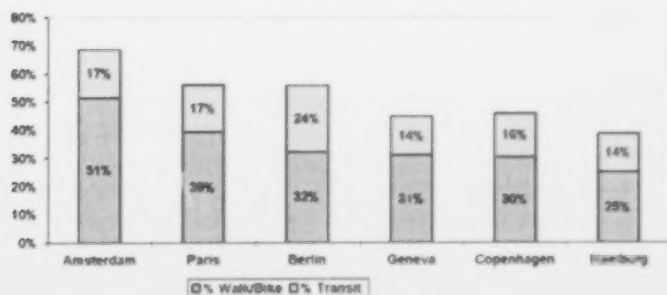
The GVRD is unique in Canada in having a municipally-organized Air Quality Management Plan. An emissions inventory for both common air contaminants and greenhouse gases has recently been updated for the region and will provide excellent baseline information.



Several workshops were held to develop the *Sustainable Region Showcase*. In this workshop, Smart Growth BC and Professor Patrick Condon from the University of British Columbia assisted member municipalities with the Transit Villages module.

Cycling/Walking Critical to Sustainability

Better public transit is often seen as the best means to a more balanced transportation system. However, experience in other regions shows that compact land use and good urban design – especially in the form of pedestrian-friendly environments and accessible, safe cycling facilities – are equally critical factors in shaping the overall transportation choices city dwellers make. After all, every transit journey starts and ends with a walk trip. Good walking and cycling facilities strongly complement quality transit service and compact land use, providing synergies that are very difficult to achieve alone. This Showcase acknowledges that support for walking and cycling are critical for moving towards sustainable transportation.



Worldwide, most cities that achieve low automobile mode-shares do so with the majority of travel by foot and bicycle. Good walking and cycling facilities strongly complement good transit service.

Building on Partnerships

The GVRD and GVTA are both regional partnerships comprised of 21 municipalities. Their technical and political committees are organized around collaboration and consensus building. This Showcase proposal was developed through one of the standing technical committees with representation from municipalities, the GVRD and GVTA. The Showcase Program will provide the opportunity to pilot many ideas collaboratively with member municipalities, as well as provincial, and federal partners, and the private and voluntary sectors. During the proposal development stage, thousands of staff hours were dedicated to the project by staff from member municipalities, GVRD, GVTA and Better Environmentally Sound Transportation (BEST). In some cases, project scoping required several multi-agency workshops to work out details. Given the tight timelines and political approvals that were necessary to secure, the process was difficult. However, the pre-approval process did result in consensus on action that will pay dividends in the development of the Showcase projects.

Thinking Regionally, Acting Locally

The jurisdiction of the GVRD covers virtually the entire commuter shed. This makes regional planning comprehensive and effective. The individual projects will be geographically focused to reflect different land use patterns and transportation choices but will be replicable in other parts of the region.

Governance Accountability Structure

The *Sustainable Region Showcase* is a broad partnership with the GVTA, the GVRD, seven member municipalities, BEST, and Simon Fraser University Community Trust. A steering committee will be formed with senior representatives from all partners, including a representative from Transport Canada and the Province of British Columbia. The Showcase project team will be located at GVTA's head office in Burnaby.

The GVTA is unique in Canada. It is responsible for the regional transit system (bus, SeaBus, SkyTrain, West Coast Express and specialized transit for people with disabilities), and also for planning and funding the region's Major Road Network. It has secure funding sources and a mandate to support the GVRD's regional growth strategy. The GVTA has a Strategic Transportation Plan to guide decisions in the current five-year time frame and staff are currently developing a new Long Term Transportation Plan.

The GVRD is responsible for the delivery of a number of region-wide services such as water, sewerage and drainage, waste management, and air quality regulation. It is also responsible for growth management. The Greater Vancouver Livable Region Strategic Plan (LRSP) is the

Year 2000 GVRD GHG Inventory

Source	Kt CO2	% All Sources
Point sources	4,425.0	27.8%
Area sources	4,423.0	27.8%
Mobile sources		
Light duty vehicles	4,223.5	26.5%
Heavy duty vehicles	846.2	5.3%
Aircraft	224.0	1.4%
Rail	137.5	0.9%
Marine	582.4	3.7%
Non road	1,061.5	6.7%
Mobile Source Total	7,076.1	44.4%
TOTAL ALL SOURCES	16,923.1	100.0%

(Source: GVRD Air Quality)

Sustainable Region Showcase

Kitsilano

Broadway

Richmond
Centre

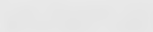
Tsawwassen

Proposal Modules:

 Main Street Corridor Transit Priority

 Central Valley Greenway

 Transit Villages

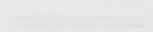
 TravelSmart

 Hybrid Bus

 Goods Movement

Also shown:

 Future Greenway Expansion

 SkyTrain



region's growth strategy. Recognized by provincial legislation, the LRSP sets out an integrated land use transportation strategy to 2021. The LRSP is used by all levels of government as the framework for making regional land use and transportation decisions. Last year, the GVRD Board launched the Sustainable Region Initiative (SRI), which will provide a framework to review all existing plans and policies in the context of advancing sustainability. A key principle of the initiative is to work closely with the voluntary and business sectors in building partnerships and synergies. The *Sustainable Region Showcase* fits very well within this initiative and will hopefully be one of many complementary projects executed during the course of the SRI.

Seven member municipalities are directly involved as partners in one or more showcase components. These include the Cities of Vancouver, Richmond, Burnaby, Coquitlam, New Westminster, Delta, and Surrey. Private sector involvement includes UniverCity, a land development corporation associated with the Simon Fraser University campus, and funds from VanCity Credit Union to help finance the Central Valley Greenway. From the non-profit sector, Smart Growth BC and Better Environmentally Sound Transportation (BEST) assisted in the development of the proposal, and BEST will be an active partner in implementing the Showcase program.

Reducing GHGs in Innovative Ways

The greatest potential to reduce emissions from transportation in the Province of BC is in managing personal travel in urban regions. The most significant opportunities are in the GVRD by virtue of the sheer scale of travel, opportunity for economies of scale in investment and probability of modal shift. Personal travel accounts for 32% of all GHG emissions in the region and 72% of emissions from mobile sources.

The Need to Demonstrate Progress

The Showcase package is designed to focus the partners' collective energies on achieving progress in critical areas of regional land use, transport supply and transport demand management where progress to date has been slow. Little has been achieved in terms of providing significant transit priority. Many SkyTrain stations do not attract the ridership possible due to their auto-orientation, poor pedestrian access or lack of area development. Regional policies consistently call for priority for pedestrians and cyclists, yet investment has not been sufficient and facilities are often basic or poorly sited. Plans call for increased densification of urban areas to support livability, yet the impacts of high volume diesel bus traffic in those corridors makes them

less attractive and create community resistance to transit expansion. Traditional employer-based trip reduction programs have had only limited success due to blunt "broadcast" marketing techniques and the targeting of only 25% of the trip market (work commutes).

By demonstrating substantive progress on a range of transportation challenges, each with unique supply, demand, land use and technology dimensions, the *Sustainable Region Showcase* will develop processes, partnerships, partnership models, funding arrangements and technical knowledge for more widespread implementation of strategies aimed at reducing GHGs and advancing sustainability.

Significant and Long-term GHG Reductions

The *Sustainable Region Showcase* has been developed to reflect the need for long-lasting GHG reductions. Some of the projects will lead to immediately observable changes due to technology changes or demand management techniques. Other GHG reductions will occur over time due to changes in land use/design, or evolving changes in travel behaviour as a response to transport supply with results that are more significant and durable.

The existing urban fabric is largely designed to ease the movement of automobiles, both in supply and pricing strategies. It is therefore not surprising that we have become car dependent. Three components seek to explore ways in which walking, cycling and transit use can become more attractive modes of choice. The **Main Street** corridor is an existing bus route experiencing heavy demand, where traffic congestion has a major impact on service reliability. The project will examine ways in which facilitating bus use can also result in improvements to the commercial viability and livability of the area it serves. Similarly **Transit Villages** examines ways to both increase the amount of development in a SkyTrain station area and improve the existing urban realm to encourage and facilitate transit use. Examining the land use and pedestrian connections to existing transit stations, this component will retrofit pilot station areas with transit-oriented developments. Connectivity and ease of use in an attractive environment are also key themes in the **Central Valley Greenway (CVG)** project. The CVG will use broad regional partnerships to build high-quality, traffic-separated bike path that will connect multiple destinations and provide a safer, more comfortable alternative to shared facilities on roads. In comparison to European cities, Canadian cities have very low mode share for walking and cycling. Many comparable cities (in terms of size and climate) have reduced car dependence through careful design and construction of integrated walking and cycling routes. CVG will adapt many of these techniques to Canadian circumstances.

While transit buses are not a significant source of greenhouse gases or local air pollution, they are perceived to be a problem in many local areas. Noise, exhaust fumes and the large size of the buses are prominent concerns. The GVTA is already introducing smaller Community Shuttle buses, and is in the process of replacing its zero emission trolley-buses with new, modern trolleys. However, trolley technology is expensive and the region cannot afford to expand the trolley network beyond its current routes. Other technologies potentially offer emission and noise benefits approaching trolleys at a lower cost, and to that end the *Sustainable Region Showcase* proposes running a controlled trial of **Hybrid Diesel-Electric Buses**. Hybrid drive systems have shown the capability of reducing fuel consumption (and hence emissions) by 50% and have noise levels approaching that of a trolleybus. This new technology is rapidly approaching commercialization, but so far Canadian transit operators have ordered none and have little experience with their revenue operation.

Urban planners in Greater Vancouver are becoming increasingly aware that transportation planning in this region has largely underestimated the significance of **freight movement**. Increased reliance on heavy trucks at the same time as the road network is experiencing growing congestion is intensifying debate about the competing demands for existing road space and the need for priority for essential movements. GVTA has recently completed the first truck freight study in 20 years, which complements Transport Canada's BC Freight study. This information now needs to be incorporated into the regional transportation model and developed into policies that will make freight transport more efficient and effective, and will reduce GHG emissions.

Transport Canada's *Straight Ahead: A Vision for Transportation in Canada* identifies a number of significant challenges. Perhaps the most daunting of these is the need to change established patterns of travel behavior. The **TravelSmart** program, which was developed in Europe and successfully applied in Australia, is a proven technique which can be readily adapted to Canadian circumstances. It concentrates efforts on the segment of the population that is not only willing to change but that also faces the least obstacles, in terms of infrastructure and services. By identifying and helping to overcome their perceived barriers, we can identify those measures that are most effective in securing permanent and significant shifts in travel behavior. TravelSmart will demonstrate the role of communication and information in changing behavior.

There is no 'silver bullet' measure that can solve the urban transportation or greenhouse gas challenge. Effective

strategies require a comprehensive range of mutually reinforcing actions and measures. While many regions have land use and transportation plans, the Greater Vancouver Region is perhaps the only one in North America with a strategy that is integrated and geographically comprehensive, and supported by an institutional and funding framework capable of giving the plans effect.



Showcase Program Meets Multiple Objectives

In addition to the GHG reductions, the *Sustainable Region Showcase* has the potential to offer many other benefits. With less vehicle use, common air contaminants are expected to decrease. Less car use has other positive environmental benefits, such as reducing contaminants that flow into the stormwater system.

The table on page 8 shows the relationship between the *Sustainable Region Showcase* and regional objectives.

Complementing Plan Reviews and the Sustainable Region Initiative

The objectives of the *Sustainable Region Showcase* mesh well with the GVRD's Sustainable Region Initiative and other regional and local transportation and growth management plan reviews. Through the Showcase Program, the Vancouver region will pilot many of the leading ideas in sustainable transportation and land use which will have a long term effect on emissions and air quality, as well as competitiveness, land use and regional livability.

Individually, each project demonstrates synergies between these various plans, including incentives and disincentives to influence travel behaviour (Transportation Demand Management, or TDM), land use and transport integration, local friendliness to walking, cycling and transit, enhanced local and regional transit supply, priority for

Relationship Between the Sustainable Region Showcase and Regional Objectives

Regional Objectives	TravelSmart	Transit Villages	Central Valley Greenway	Main Street Transit Priority	Hybrid Bus	Goods Movement
Reduce GHG Emissions	✓	✓	✓	✓	✓	✓
Reduce CAC Emissions	✓	✓	✓	✓	✓	✓
Increase Transport Choice	✓	✓	✓	✓		
Land Use Integration	✓	✓	✓			
Protect Green Zone		✓	✓			
Economic Development		✓	✓		✓	✓
Enhance Goods Movement	✓	✓	✓	✓		✓
TDM Incentives	✓		✓			
TDM Disincentives						
Manage Parking		✓				
Retrofit Neighbourhoods	✓	✓	✓	✓		
Outreach & Communication	✓	✓		✓		
Public Involvement	✓	✓	✓			
Priority: transit/bikes/peds		✓	✓	✓		
Transit-oriented Development		✓		✓		
OCP Coordination	✓	✓	✓	✓	✓	✓
Improve Regional Transit		✓		✓	✓	✓
Improve Local Transit		✓		✓	✓	
Enhance Local Livability	✓	✓	✓	✓	✓	✓

transit on city streets, goods movement efficiency, social marketing and community outreach, parking management, traffic calming and inter-agency co-ordination.

Public Awareness

Council and Board approvals secured for the proposals have enabled us to begin the public outreach process. Through Council, GVTA Board and GVRD Board agenda items and approvals, elected representatives have expressed strong support for this Transport Canada initiative. The Showcase Competition has also attracted interest from the media in local papers (see Appendix C). Two non-profit sector organizations have been involved from the beginning and their continued involvement will assist with outreach efforts. Each module will have a separate public outreach strategy. A website will be established at the GVTA to track progress on all the modules and to provide partners and the public regular updates. There will be periodic workshops to tie module progress together and learn from each project.

Where the opportunities arise, the Showcase project will be

"piggybacked" on other events, such as local transportation conferences, SRI events, community meetings, and the like. Progress reports will be presented to staff and political committees.

Sharing and Replicability

The *Sustainable Region Showcase* contains many elements that can be expanded regionally or elsewhere in Canada to replicate the benefits. It is expected that much will be learned from the "learning by doing" process within the region as the Showcase evolves. Many of the projects work at any scale—neighbourhood to entire regions. The Main Street Transit Priority project was specifically selected because it has the characteristics of many streets in the region as well as in many cities across Canada. TravelSmart can be done on both a small neighbourhood scale or at a much bigger regional scale depending on the resources available. The Transit Villages experience can be used for fixed rail or bus-base systems.

The *Sustainable Region Showcase* will contain impact assessment reporting techniques that will be replicable elsewhere in Canada. The project will tap into the expertise on greenhouse gas emissions monitoring at the GVRD and will make use of the extensive emission inventories already developed. It will also have the technical support of the GVTA's newly established Transportation Research and Information Management Group. The trip diary studies (extensive region-wide travel surveys) conducted in the past by the GVTA will assist in both the construction of new surveys and the comparison of historic data. A new trip diary survey is scheduled for 2004 and will provide important baseline information for the region upon which the Showcase initiatives can build.

Vancouver Region to Host World Urban Forum in 2006

Vancouver has been chosen to host the World Urban Forum in 2006, thirty years after the anniversary of the first such forum, Habitat 76 in Vancouver. Over the past few months, UN-HABITAT staff have been working closely with the Canadian federal government to explore thematic approaches to furthering the objectives of the World Urban Forum as a platform for dialogue on urbanization and cities. The Transport Canada Showcase program will be reaching its final stage at the time of this conference and therefore present an opportune time to "showcase" the results from across Canada. The GVRD and GVTA will be assisting in the organization of the forum and they hope to put forward "sustainable transportation" as one of the key themes.



DETAILED SHOWCASE DESCRIPTION



This section describes each of the six *Sustainable Region Showcase* measures in detail. As discussed in the previous section, GHG reduction in the transportation sector requires a mixture of supply and demand, land use and behavioural change measures. The proposed projects knit together a combination of measures that will help move us off the trajectory of continued increase in GHG emissions and onto a path of decreasing GHG emissions. Many of the measures are mutually reinforcing. For example, improved transit supply will make it easier for households to find alternatives to car-based travel, while an improved public realm around stations will increase the attractiveness for more development in close proximity to transit. Geographically, many of the projects are also integrated. The Central Valley Greenway crosses the Main Street Corridor, hybrid buses could be employed on Main Street, and the Commercial/Broadway transit village project is also on the path of the Central Valley Greenway.

Successful strategies also depend on moving the sustainable transportation problem beyond a government policy issue and into the realm of being shared among the private and non-profit sectors and individual citizens. The *Sustainable Region Showcase* has already had extensive municipal involvement as well as some private and non-profit sector partnering at the proposal stage. Building partnerships with citizens, the private and non-profit sectors and all levels of government will be a key organizing cornerstone of the *Sustainable Region Showcase*.

The six measures are:

3.1 Main Street Corridor Transit Priority, p. 10



Provide comprehensive transit priority measures and transit passenger amenity improvements on one of the highest volume local bus routes in the region.

3.2 Hybrid Bus Demonstration, p. 19



Test the viability of low emission, low noise diesel/electric buses in Greater Vancouver.

3.3 Central Valley Greenway, p. 24



Thread a predominantly traffic separated 22 kilometre bicycle and pedestrian pathway through three municipalities in the centre of the region.

3.4 Transit Villages, p. 34



Increase transit-oriented development in SkyTrain station areas and improving the physical environment, and pedestrian, cycling, and bus accessibility.

3.5 Goods Movement, p. 39



Undertake detailed studies and analysis to examine opportunities for improving the efficiency of goods movement and reducing GHG emissions in the region.

3.6 TravelSmart, p. 42



Initiate a residence-based travel marketing program targeting households expressing a desire to try alternative modes.

SECTION 3.1

MAIN STREET TRANSIT & PEDESTRIAN PRIORITY



Introduction

Increasing traffic on regional roads has significant negative impacts on the pedestrian environment, transit operations and the transportation system. Slow, unreliable transit service results in lower transit ridership, higher transit operating and capital costs, higher auto use and an increase in local air pollution and GHG emissions. These problems are particularly acute in the City of Vancouver, where traffic volumes and density are higher than elsewhere in the region.

Vancouver's Main Street is a major north-south arterial link to the metropolitan core and carries the highest volume of passengers of any local transit corridor in the region. It also knits together a number of established and emerging neighbourhoods, industrial and business centres, each with a unique character. Walking and transit are critical to these neighbourhoods' economic viability, providing businesses with high exposure and a strong, loyal customer base.

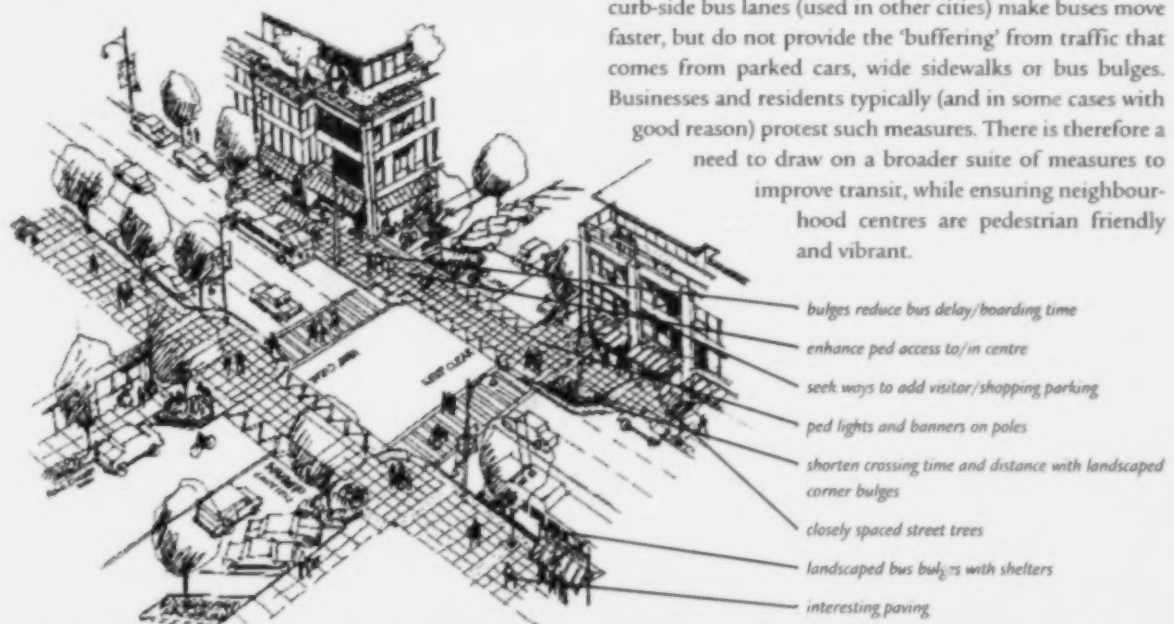
Main has moderate to high auto traffic levels, ranging from approximately 15,000 vehicles per day per direction (VPD) in its central sections to 25,000 in its northern section feeding the Central Business District (CBD). The GVTA's #3 Main is a high-frequency route, operating every five minutes

in the peak hours. Its electric trolleybuses carry approximately 23,000 passengers per day. The volume of passengers is highest on Main's northernmost section, where three other busy routes share the corridor. The combined volume of bus passengers on Main Street is higher than that of many light rail systems in North America.

Main Street suffers from significant congestion delays that affect transit travel time, reliability of services, operating costs and ridership. It also has challenges in terms of pedestrian accessibility (upon which transit ridership depends), pedestrian safety and poor passenger amenity (shelters, information, etc.).

Both regional and local transportation policies are designed to give transit and pedestrians priority and enhance local neighbourhood centres as a means of supporting reduced reliance on automobiles. However, there has been relatively little progress in providing transit priority on the region's streets. What has been implemented has been spotty—for example, small sections of bus lane or isolated bus bulges pursued independently and incrementally. Therefore, synergies between measures are often not realized, nor are benefits that are significant, measurable or sustained.

Furthermore, traditional approaches to transit priority are not appropriate for all corridors. For example, continuous curb-side bus lanes (used in other cities) make buses move faster, but do not provide the 'buffering' from traffic that comes from parked cars, wide sidewalks or bus bulges. Businesses and residents typically (and in some cases with good reason) protest such measures. There is therefore a need to draw on a broader suite of measures to improve transit, while ensuring neighbourhood centres are pedestrian friendly and vibrant.



Drawing: Frank Ducote

A new approach

The Main Street Transit and Pedestrian Priority showcase will demonstrate the effectiveness of a comprehensive approach to transit and pedestrian priority. It involves:

Improving Street Design to reduce bus delays and pedestrian crossing time, enhance pedestrian safety, and improve streetscapes and commercial vitality;

Deploying Intelligent Transportation Systems (ITS) to improve bus service speed, reliability and monitoring;

Increasing Customer Information and Amenities to provide real time information and improve passenger comfort;

Providing Higher Bus Service Levels to reduce waiting times and crowding; and

Marketing the New and Improved Services to retain existing riders, win back lost riders and encourage new riders.

This approach recognizes that pedestrian safety and interest, vibrant neighbourhood centres and reliable and efficient transit are mutually reinforcing conditions for reducing reliance on the automobile and GHG emissions. Transit priority measures should therefore be context-sensitive and seek to support and strengthen the diverse and changing functions of the street, with transit perceived as an asset. Bus stops should be comfortable, secure and allow patrons to get on and off the bus with ease. Neighbourhood centres should be pleasant places to walk, providing user interest and prospective customers for transit.

Context/Background

Main Street is a major north-south travel corridor in Vancouver. It is 8.2 kilometres long and links the Metropolitan Core with south Vancouver. The route has historical significance since it was one of the first high streets and the first north-south streetcar line in the City. Vancouver's Transportation Plan completed in 1997 identifies Main as a "major transit corridor", offering an opportunity for higher levels of urban design, and street and architectural treatment.

A Tour of Main Street

Main has a varied landscape that changes markedly in character as one travels the corridor (see Map, page 15).

The #3 Main starts in southern Vancouver at Marine Drive, an area where industries skirt the Fraser River. It serves moderate density housing before it reaches its first neighbourhood centre, the Punjabi Market, a vibrant concentration of South Asian shops, restaurants and culture. This is

where traffic and pedestrian activity begin to build more significantly on the corridor. Main then serves a major post-secondary institution, Langara College, and further north, Queen Elizabeth Park and a proposed 2010 Olympic venue. As mid-Main approaches, both residential and commercial densities increase.

The mid-Main area is a dynamic and emerging high-street. Buildings are developed to the property lines giving the impression that the street narrows. Cafes, restaurants, antique traders, community centres and social clubs mix with basic shops and services—clothiers, butchers, bakers and general stores—making for a vibrant pedestrian atmosphere day and night.



The Punjabi Market near Main and 41st Avenue is a vibrant area, but in need of improved transportation infrastructure.

The area of Mount Pleasant follows. Here, medium density residential and commercial development established themselves along the edge of several busy streetcar lines many decades ago. The Main-Broadway-Kingsway triangle in Mount Pleasant remains one of the busiest transit hubs in the region with five heavily used bus routes converging, including the 99 B-Line limited stop express route. In the coming years a new SkyTrain Station, community centre and a number of high density residential and commercial developments will reinforce its role as a transit hub.

North of Broadway, Main becomes part of the region's Major Road Network. It connects evolving residential, industrial and commercial lands to a transportation hub at Terminal Avenue. Here, Main Street/Science World SkyTrain station, the Downtown Streetcar, Pacific Central Train Station and the CVG (and several other bike routes) meet. High-density office and residential uses are already leading redevelopment in this area. Land use strategies are designed to promote high-density housing and street-level commercial uses, in a development that will showcase sustainable urban development (as well as an athletes' village should Vancouver be selected to hold the 2010 Olympics).



Main Street just south of Broadway is an important local retail hub close to regional transit connections, but lacks good pedestrian amenity.

To the east following the CVG will be office development and satellite post-secondary schools along former rail lands.

Finally, Main serves the edge of the downtown core, Chinatown and Hastings Street (another major east-west transit corridor) before entering Vancouver's Downtown.

Transportation on Main Street

Main Street is one of the most heavily used transit corridors in the Lower Mainland. Route #3 Main operates every 4-5 minute during the day and 7-8 minutes in the evenings. With over 23,000 transit boardings daily, the #3 is the busiest local route in the GVRD and the second busiest overall. Three other bus routes that share the northernmost 2-3 km section of Main Street (#8 Fraser/Granville, #22 Knight/MacDonald and #19 Metrotown/Downtown) are also ranked amongst the busiest. These routes pick up another 7,000 passengers over their relatively short, shared sections with #3 Main.

Underscoring the #3's importance as a local route, approximately 70% of patrons do not transfer to or from other services. This means that, unlike many other routes in the region, the majority of #3 users depend solely on this one route.

Main is also an important arterial road for general and truck traffic. Since it does not have a bridge crossing the Fraser River, it is essentially a "local arterial" for the most part. It nonetheless carries moderate to significant levels of traffic, ranging from 15,000 VPD per direction on sections south of Broadway, to over 25,000 for a 2km section north of Broadway (to the Dunsmuir Viaduct). This is where Kingsway merges into Main and it becomes part of the region's major road network.

Numerous important city bikeways and greenways also connect to Main Street. The Ontario Greenway runs paral-

lel to much of the Main corridor and many other east-west routes intersect it regularly.

Transportation Challenges

Transit ridership on Main is threatened by shifting demographics along the corridor as 'captive' transit users are gradually replaced by a growing number of residents who tend to have ready access to other modes of transport, especially the automobile.

Results of recent travel studies also indicate that transit services are heavily impacted by traffic congestion along the route, reducing their attractiveness. In a recent survey of bus reliability, between 16% and 83% of buses were found to arrive later than scheduled (see table below). This is due to several factors including high traffic volumes, parking conflicts with automobiles, and conflicts with moving vehicles as transit vehicles pull out from a stop and back into the traffic stream. This is particularly the case in the northbound off-peak direction when parking is present.

Direction / period	% late
Northbound AM (peak)	16%
Southbound AM	22%
Northbound PM	83%
Southbound PM (peak)	16%

Reliability is poor on the #3 Main, particularly northbound in the afternoon and evening.

On average, over 100 people per hour board Main buses. Services on Main Street are well used in both directions throughout the day. Ridership is highest in the peak directions, averaging between 51 and 53 passengers (well beyond the seated capacity of 40), often reaching full capacity of 75 passengers. Standing room only is common in off-peak periods as well.



Main and Broadway: one of the busiest transit hubs in the region

There are a number of other related transportation challenges on Main Street. For example:

- Lack of shelters and space for shelters at bus stops;
- Signals are not timed to allow buses to move quickly along the corridor;
- Congestion affects loading and unloading of vehicles, slowing service;
- Buses "bunch" as a result of delays resulting in long waits followed by overcrowded buses;
- Transit information (schedules, routing) is generally not available at bus stops;
- Pedestrian access and safety are not optimal—wide intersections, crossing restrictions, high volume traffic and poor visibility mean crossing streets can be dangerous and uncomfortable; and
- Lack of weather protection for pedestrians.

Plans Support Transit and Pedestrian Priority on Main

In 1997, the City of Vancouver produced a long range Transportation Plan that recommended strategies designed to reduce reliance on the private automobile. Main was identified as one of five major transit corridors suitable for transit priority including bus lanes, bus bulges and signal priority for buses. In addition to providing more road space and priority for transit, the Plan also supports improvements to transit comfort and convenience, including increased service levels, more comfortable boarding areas and better information.

The Plan also recognizes the importance of transportation as a tool to strengthen neighbourhood centres. This includes policies to "place pedestrians as the first priority in transportation planning."

Regional Plans also call for increased transit priority, including enhancing and retrofitting streets to favour transit, bicycle and pedestrian uses. In the Fall of 2003, the GVTA will begin working with the City of Vancouver on developing a three year 'Area Transit Plan' for the City. The plan will focus on increasing transit market share through a range of initiatives. This will provide an ideal opportunity to integrate changes to Main with changes in the rest of the network and to apply technical knowledge and research gleaned from Main to other local routes.

Main Priority Development Process

Since January 2003, GVTA and City of Vancouver engineering and planning staff have worked together to define the roles, timeline and process for developing the Main Street Pedestrian and Transit Priority Showcase. A list of principles and objectives were developed jointly to guide

the development of Showcase initiatives and determine the scope of initiatives to be included.

A number of meetings and workshops were held with staff from both agencies' planning and engineering divisions. These included "walkabouts" on Main Street to identify challenges and opportunities for the project.

GVTA and City staff identified an inventory of potential transit treatments, possible locations and cost estimates, while City staff identified potential improvements for pedestrians and cyclists, including intersection treatments, streetscape spot improvements, lighting and other amenities. The measures identified addressed longstanding issues raised by the community, or responded to imminent needs as a result of current and planned developments.

Costs are well-defined based on preliminary assumptions regarding identified transportation issues and resulting capital and operating needs for the project. However, the Showcase development process did not allow for a broader public consultation process, which will be required prior to implementation. It is expected that there may be some changes in the scope of improvements, and a capital allowance has been made to undertake further "spot improvements" identified through subsequent technical development and public consultation.

The Main Street Concept

There is a wide range of strategies available to encourage increased transit use. The design of the street, transit operations, service levels, land use, marketing, and customer support each play a role. Responsibility for these various strategies is shared between a variety of public and private interests — planners, engineers and marketing professionals, as well as community and business improvement associations. In the past, efforts to implement transit priority measures have not been well coordinated amongst these interests and have lacked the scale and scope to achieve real and observable change in travel patterns. Further, measures to improve local business, transit operations and efficiency, pedestrian safety and amenity have generally been implemented in isolation.

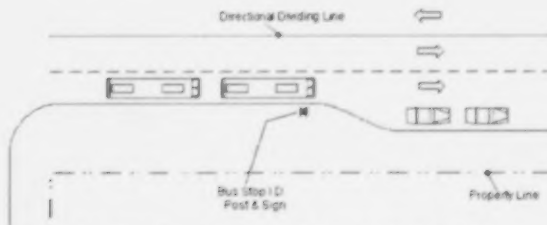
Main Street Strategy: Create a Whole that Is Greater than the Sum of Its Parts

The Main Street Showcase provides an opportunity to combine a range of complementary strategies in a coordinated approach along an entire travel corridor. These are intended to achieve synergies that each measure by itself may not be capable of achieving.

The five broad strategies include:

1. Changing Street Design

Bus Bulges - Curb extensions will be built so that the bus does not need to pull into or out from the curb lane in order to pick-up and drop-off passengers. Bus bulges will increase the space available for pedestrians, street front shops, bus shelters and parking. They will also improve service reliability and the public image of transit and can increase the speed of general purpose traffic by eliminating merging manoeuvres. A bus bulge is illustrated below.



A bus bulge allows buses to stop in the moving lane of traffic.

Pedestrian crosswalk treatments - Curb extensions, lighting and crosswalk pavement delineation will improve pedestrian visibility and safety, reduce pedestrian crossing distances, and reduce the amount of time required for red light phases, thus reducing congestion along the corridor.

Queue jumpers - Congested sections of the roadway will be reserved for transit vehicles (i.e. short bus lanes) to avoid traffic queues, increasing the speed of buses relative to other traffic.

2. Deploy ITS and Test Operational Improvements

Signal Priority - Signal priority will be introduced along the entire corridor, improving the speed of transit by reducing the number of red lights that transit vehicles encounter and triggering and maintaining green phases if and when buses are behind schedule.

Headway Based Scheduling and Operations - Automated Vehicle Location (AVL) will be used to help buses depart at regular intervals from timing points to improve reliability/efficiency.

On-Street Supervisors - It is not clear whether technology is the best way to manage headways, or whether it can be done more cost effectively with on-street supervisors. This three month pilot study will use on-street supervisors stationed at timing points to assist in maintaining schedule adherence. This will be conducted in advance of the AVL-based system to determine which is most cost-effective.

3. Improve Customer Information and Amenity

Bus Stop Enhancement - Many stops along the entire corridor will be reconstructed with improved lighting, rain protection, seating, garbage facilities and security phones. Up to 35 stops identified as having high boarding volumes will be fitted with shelters to ensure passenger comfort.



High quality shelters, information and amenities make waiting for transit a more comfortable and convenient experience.

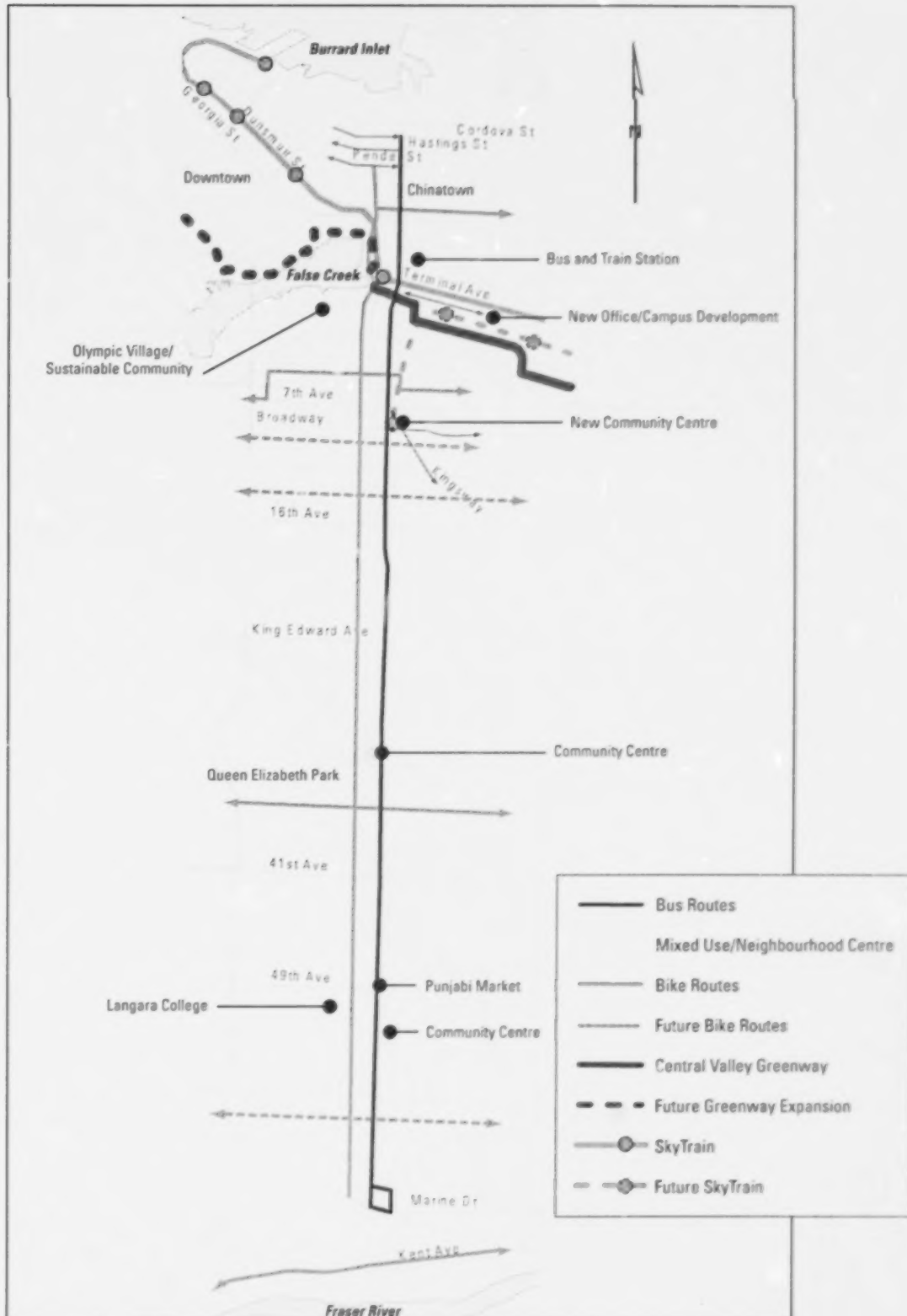
Pedestrian and Cycling Enhancements - Enhancements to pedestrian and cyclists safety and comfort will improve access to Main Street. Bike racks will also be fitted at or close to bus stops where possible. Trolleybuses in Vancouver are due for replacement and therefore have not been fitted with bike racks, which the rest of the fleet received in recent years. New trolleybuses being delivered in 2005 will have bike racks.

Improved Customer Information - Real-time schedule information will be provided on electronic signage at stops, by phone and via the Web to aid trip planning and improve customer safety. Remaining stops will have current copies of printed schedules posted. This will be coordinated with the marketing effort (see 5 below) so that stops will have posted maps of local amenities and landmarks, a customized bus route diagram and frequency information.

4. Providing Higher Service Levels

The measures proposed are projected to achieve a 10-15% efficiency improvement, which could result in the savings of up to two trolleybuses (approximately \$2 million capital cost) and up to 6,000 transit service hours (approximately \$500,000 annual operating savings). Resources saved due to transit priority measures will be used to increase bus frequency and capacity on Main Street corridor, increasing ridership further. In effect, more service will be delivered at no incremental cost to the GVTA.

Main Street Corridor



5. Marketing New and Improved Services

Transit service improvements are often the region's best kept secrets. Beyond one-off community paper print ads, users are typically expected to discover improvements themselves. A comprehensive marketing program will be undertaken to raise awareness of the significant changes, improve the image of the street and transit, and encourage new riders. Campaigns will range from radio and newspaper print ads, news stories on local media, ads on buses and transit shelters (*see 4 above*), and targeted household and business marketing in the catchment area.

Although each of the measures identified have been implemented elsewhere in the region, the Main Showcase marks the first time that these measures will be implemented on such a scale and coordinated along an entire travel corridor. Synergies between these measures can be evaluated.

There are many other streets like Main throughout the region, and across Canada. It is expected that this approach will provide valuable lessons for making significant improvements to local transit corridors in this and other regions. Improving transit efficiency, while strengthening neighbourhood centres is important in all urban areas.

Opportunities and Synergies

While the Main Corridor is ideal to pilot these improvements because of its importance and challenges as a transit corridor, there are a number of other opportunities and related synergies that make Main a good candidate for this Showcase:

- Approximately 3.5 km of Main Street (between Terminal and 33rd) is scheduled for street repaving and sewer/water line reconstructing. This will allow for cost savings and would minimize disruption to roads users and businesses if the street and Showcase work is done concurrently.
- A new community centre at Main and Kingsway will be completed in 2005, and related pedestrian safety upgrades will be required at this major intersection.
- Several other commercial and residential developments are pending in the Mount Pleasant area allowing for the potential to incorporate streets and streetscape changes into developments.
- The CVG intersects with Main Street, allowing for synergies in treatments on Main.
- The #3 Main will be a critical transit connection should Vancouver be selected for the 2010 Winter Olympics (connects two venues, including the Olympic Village).
- Delivery of the transit system's new trolleybuses is expected to begin in 2005, with trolleys first being

Improvements Support Economic & Social Development

In March of 2000, the City of Vancouver, the Province of BC and the Government of Canada, through the Western Diversification Canada, committed to the Vancouver Agreement. The Agreement's goal is to support sustainable economic, social and community development in Vancouver, with an initial focus on Vancouver's Downtown Eastside. In support of the social and economic efforts, the Agreement will fund significant physical improvements on Main Street north of Terminal Avenue that will enhance the comfort and safety of pedestrians and transit users. Improvements to lighting, continuous weather protection, the re-introduction of 24 hour parking and bus and corner curb bulges will support increased pedestrian activity and revitalize the commercial district.

deployed on the #3 providing significant additional profile to the Showcase.

- A medium range transit plan for the City of Vancouver will be conducted in 2004; recommendations for Main Street can be incorporated into planning for other routes in the City.

Process and Timelines

The Main Showcase will be implemented in stages over the course of a year. After each stage monitoring and evaluation will be undertaken and documented in order to understand and record the impacts of each measure.

Monitoring and Evaluation

It is planned that implementation of the Main Street showcase will be staged so that the individual and cumulative impacts of measures can be evaluated. The monitoring program will be structured to establish baseline data and allow for pre/post implementation monitoring and evaluation of each measure. Measures will be staged in the following order:

- Street design: bulges, intersection safety, shelters
- On street supervisor pilot
- ITS headway management pilot
- Signal priority, information systems, new service
- Marketing program

The program will be structured to isolate and quantify the impacts of each measure on transit speeds, reliability and ridership. It will also consider the speed and volume of general purpose traffic, pedestrian traffic volumes, impacts on local businesses, and user attitudes and preferences. While the monitoring program will endeavor to test and evaluate variables independently, it is recognized that the project is

being implemented in a dynamic urban environment, and that timing and practicality necessitate the introduction of several measures simultaneously.

Current GVTA buses have electronic fare boxes, but no AVL or automatic passenger counting capability. New trolleybuses on order will begin to be used on Main in 2005. These buses will be equipped with on-board AVL and APC capability. Initial base monitoring will rely more on manual monitoring, whereas post-2005 monitoring will rely more on automated monitoring.

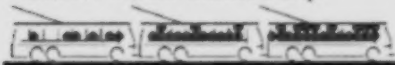
The following key performance measures will be monitored on an ongoing basis:

- Transit travel time
- On time performance
- Frequency of "pass-ups" (when full buses cannot pick up waiting passengers)
- Boardings and transfer rates
- Fare revenue
- Pedestrian, bike and auto volumes
- Safety accident rates at new facilities
- Public and business opinion, attitude and preferences;
- Transit operating costs (per revenue km and revenue hr)
- Value of travel time savings (quantified dollar value of user travel time saved)

Measuring GHG Reductions

While increasing transit boardings and revenue are a important measure of success, it will be important to determine modal shift in order to estimate GHG reductions. This will be done in two ways. The first is through intercept interviews in late 2005 where users will be asked to identify origin-destination points for the trip, residence location, frequency of use, trip purpose, previous transportation mode, satisfaction levels and response to changes. The second is through a benchmark study of 250 households measuring existing travel behaviour and attitudes prior to project implementation. An additional sample of local residents, plus benchmark sample still residing in area, will be polled post-implementation to measure shifts in attitudes and travel behaviour.

TODAY: 30-38 minute trip



FUTURE: 26-28 minute trip



Transit Priority measures reduce bus bunching, crowding, and travel time, thereby shifting users from the private automobile.

Cost

Total cost for the Main Street Transit and Pedestrian Priority Showcase is estimated at \$6.4 million. Of that, \$1.16 m will be contributed by the City of Vancouver in-kind. This represents the cost of transit shelters from the City's street furniture program, funded through advertising revenues. Another \$600,000 is contributed in-kind from the GVTA and represents the 'reinvestment' of operating savings captured from efficiency measures into increased service levels in the corridor in 2004-2005. An annual in-kind contribution of \$300,000 is sustained thereafter.

Remaining financial costs are shared roughly in thirds between the GVTA, City of Vancouver and Transport Canada.

Expected Impacts

The project is expected to achieve reductions in GHG emissions through increased use of alternatives to the private automobile.

It is expected that bus service on Main will be considerably more attractive to both existing and potential transit users as a result of:

- Improved bus travel time
- Improved transit reliability
- Better distribution of service
- Higher service levels resulting from operating savings "reinvested" in better frequency

At present, the speed and quality of service along Main varies significantly. Traffic delays contribute to slow, unreliable and crowded service. As buses are delayed, each has to process more passengers as they accumulate at stops, taking more time for boarding and alighting. Since the Main Street routes use electric trolleybuses that cannot overtake each other, buses tend to catch up to the leader and "bunch". The result is not only slower, more crowded service, but long wait times, followed by several buses in quick succession.

Today, buses suffer a great deal of travel time variability - from 30 (scheduled) minutes to 38 minutes (including average delay) during rush hours from Marine to Downtown - in addition to severe crowding at times. The

Main Priority Showcase will see passenger loads balanced and scheduled travel time dropping 26 minutes, with only 2 minutes of average variability. The result should be an reduction in travel time of between 15% and 45%, with much less variability.

Faster Travel Speeds, Lower Cost

Added speed and predictability will allow the GVTA to increase service frequency by 10-15% (serving up to 200 more passengers per hour) with little additional cost. This increase in service frequency is expected to have the dual impact of reducing crowding further, while reducing wait times. Further gains in ridership are expected as a result.

Better Transit Means Less Driving

It is estimated that the Main Transit and Pedestrian priority Showcase will result in the following reduction in GHG emissions (see Section 4 for definitions of time horizons):

- Short term (2006): 2,000-2,500 tonnes
- Medium term (2013): 2,500-3,000 tonnes
- Widespread implementation: 20,000-50,000 tonnes

Sharing and Replicability

Transit priority is a pressing need in the GVRD. With little experience with transit priority in the region, the Main Street Showcase will prove an important test of the effectiveness of both a range of individual techniques, as well as that of a comprehensive approach that can help realize sustained gains to the attractiveness of transit, while supporting the vitality of communities upon which transit depends. It will also demonstrate to transit providers in this region and elsewhere the benefit of using existing resources more efficiently as an alternative to increasing budgets to provide more transit.

This project will document the social, environmental and economic impacts of a coordinated package of pedestrian and transit improvements along an entire transit corridor. Impacts will be published in a written report and on the GVTA web site and communicated to public agencies across Canada via the internet and through industry groups such as the Transportation Association of Canada (TAC) and the Canadian Urban Transit Association (CUTA). It is also expected that summary results will be presented to the Transportation Research Board (TRB) for publication.

Main Corridor Measures Are Mutually Reinforcing

Measure	Benefits
Bus/Pedestrian Bulges	• Increases space available for pedestrians, street front shops, bus shelters • Reduces bus merging manoeuvres delay buses and general purpose traffic • Improve transit reliability and the public image of transit • Eliminates cars illegally parking in bus stops • Increases the amount of space available for curb lane parking • Makes a bus trip more comfortable by eliminating the need for lane changes • Reduces pedestrian crossing distances and length required pedestrian lights • Reduces auto delay due to long red light phases for pedestrians • Improves pedestrian visibility and safety • Increases space available for pedestrians waiting to cross
Queue Jumpers	• Allows transit vehicles to avoid traffic congestion • Improves transit reliability and visibility • Reduces conflict between transit vehicles and autos
Crosswalk treatments	• Improves safety and comfort for pedestrians and cyclists • Helps to increase driver awareness of pedestrians and cyclists • Calms vehicle traffic at intersections where most accidents occur • Encourages pedestrian activity thereby improving commercial viability
Customer amenities	• Improve comfort and safety for pedestrians and transit users • Make the public realm more attractive
Signal Priority/ITS	• Improves transit reliability and travel speed • Lower operating costs and driver stress • Improves safety and comfort for transit patrons
Marketing and customer information	• Encourages increased transit usage and modal shift • Improves access to the transit system and user safety • Builds awareness of the benefits and advantages of transit

HYBRID BUS DEMONSTRATION



Introduction

Diesel buses are the mainstay of the transit industry. They are a relatively low-cost, low-risk technology. Diesel bus emissions have improved significantly within the last decade due to improvements in engine and transmission controls, use of oxidation catalysts, after-treatment devices and cleaner fuels. However, most of these improvements have focused on the regulated emissions - particulate matter, nitrogen oxides and carbon monoxide. Carbon dioxide is not regulated for transit buses and is therefore not a primary consideration for bus and engine manufacturers in vehicle design. From the transportation provider's perspective, however, the most effective way to reduce fleet carbon dioxide gases for a given service level is to reduce fuel consumption.

This is an opportune time for the GVTA to investigate and evaluate emerging vehicle technologies and their suitability for the Lower Mainland. It is expected that for replacement and expansion of the fleet to meet population growth, the GVTA will need to acquire up to 460 new buses between 2006 and 2013. A further 200-400 may be required depending on whether more aggressive transit expansion is pursued. While transit buses produce significantly fewer emissions relative to accommodating the same volumes of people by car, the emissions and community impacts of significant bus expansion are still important considerations in vehicle procurement.

This is particularly the case for denser urban areas, where high volumes of bus traffic can have significant localized impacts in terms of noise and diesel particulate. These problems create a negative public perception of transit and can compromise transit's perceived ability to achieve broader environmental goals. For example, local residents may resist transit expansion because of real or perceived noise and emissions impacts, impacting the region's ability to shift trips from car to transit.

Hybrid technology has shown tremendous promise during initial prototype development and is currently on the verge of larger scale production. In New York City, 325 new hybrid buses are being purchased at a premium of approximately 30% over the cost of a diesel bus. While the capital cost for a hybrid bus today is at a premium due to low production volumes and labour intensive construction, manufacturers have predicted price parity with diesel buses once

higher annual sales and increased competition between manufacturers are achieved.

This project examines how hybrid buses can improve both the fuel efficiency of vehicles and the public perception of the transit bus. Hybrid buses use a small diesel engine to power an electric generator that together power the bus. This can reduce bus GHG emissions by approximately 40% over a standard diesel bus and other harmful exhaust emissions by 65-97%. It can also reduce noise emissions considerably—up to 70 decibels, approaching that of an electric trolleybus. Hybrid buses would significantly reduce the impacts of air pollution and noise on transit corridors that have a high volume of diesel bus traffic. Equally important, they would give transit a more positive image, thereby contributing to local livability and encouraging transit supportive land uses.

Context/Background

Existing Bus Fleet is Diesel-Based

TransLink currently owns a fleet of approximately 1,200 buses, including electric trolleys, conventional diesel and Compressed Natural Gas (CNG) buses. About three-quarters of the fleet are diesel vehicles.

The GVTA will need to procure replacement vehicles for the diesel fleet with 460 buses scheduled for retirement alone by 2013. A new Long Range Transportation Plan is currently examining options for expansion of the fleet, including numbers and size of vehicles, as well as the available technologies.

GVTA Bus Fleet Composition



HYBRID BUS DEMONSTRATION



Introduction

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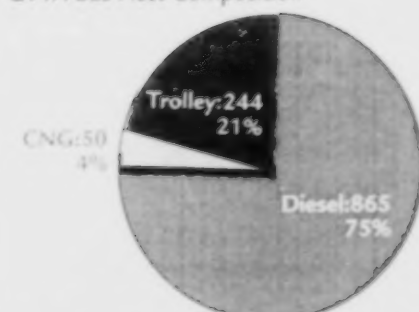
Context/Background

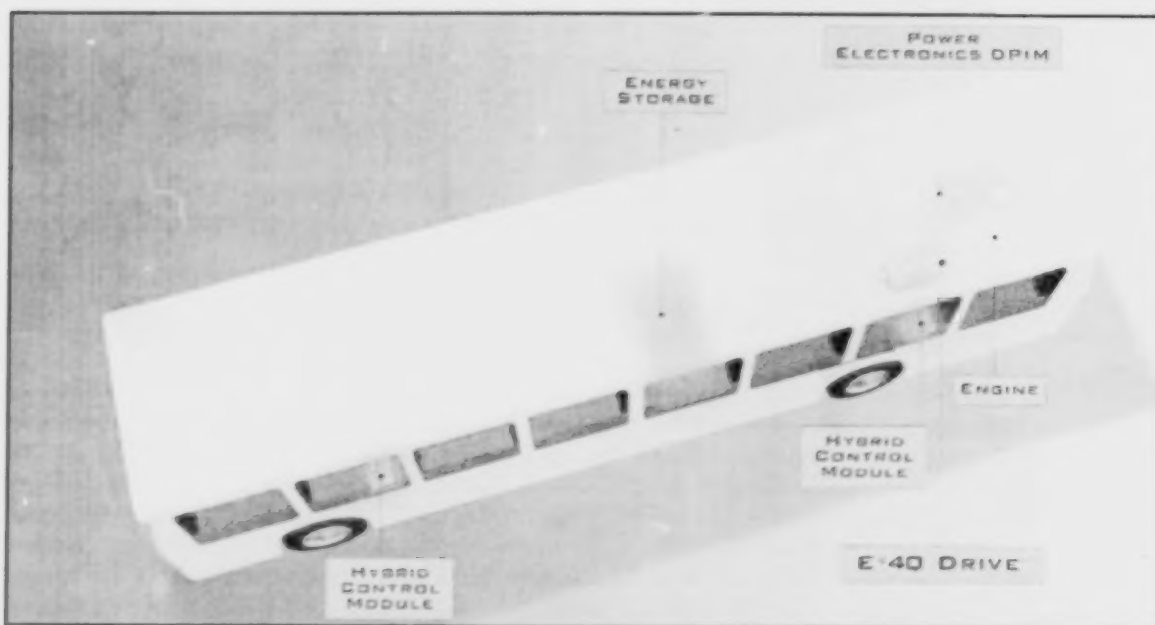
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GVTA Bus Fleet Composition





The Allison Electric Drives EP hybrid propulsion system components. (Source: Allison Electric Drives, GM Corporation)

The GVTA is in the process of replacing its 20 year-old fleet of 244 trolley buses with new trolley vehicles expected for delivery beginning in 2005. The primary reasons for the decision to purchase new trolleys is that they are clean and quiet, characteristics of particular importance for those living adjacent to high volume bus routes. However, trolley expansion is expensive. New vehicles cost approximately \$1 million apiece, and expansion of overhead wires is estimated at approximately \$1 million per kilometre. The GVTA is therefore examining technology options that can achieve results closer to those of a trolleybus, but at a lower cost that would allow for more widespread implementation.

Responding to Local Concerns Over Bus Impact

In 1999, the City of Vancouver formed the "Bus Impact Task Force" to provide City Council with advice and recommendations with regard to various aspects related to bus usage within the City of Vancouver, such as noise and air pollution, congestion and routing, among others.

Based on the work of the Task Force, Council forwarded a series of recommendations to the GVTA regarding abatement of noise and pollution from buses to address city livability issues. This included a request to replace and expand the electric trolley fleet. While replacement of the trolley fleet has been approved and is now underway, further expansion of the fleet (i.e. replacing other diesel routes with trolleys) has not been undertaken.

Hydrogen Fuel Cell Bus Demonstration

In 1999 the GVTA partnered with Ballard Power Systems to demonstrate the viability of fuel cell technology in actual transit revenue service using these prototype vehicles. The Ballard Bus Demonstration Project involved the acquisition of three standard bus shells, which were modified extensively by Ballard to accept fuel cell technology. After the one year demonstration ended in 2000, the proprietary fuel cell equipment was returned to Ballard Power and the bus shells were placed into storage. It is proposed that two of these bus shells be retrofitted with hybrid power technology developed by Allison Transmission.

Hybrid Technology Explained

A hybrid bus uses a relatively small diesel, gasoline or Compressed Natural Gas (CNG) engine to power an electric generator that provides a constant electric current to the vehicle's batteries. In the case of the *parallel* hybrid, which is the current technology direction, power is transmitted to the wheels through either the electric drive system or directly from the engine as conditions dictate. Regenerative braking is used to enable the recovery of electrical energy for storage and later use for auxiliary systems or power. In addition to improved fuel economy, reduced emissions and more efficient braking, hybrids exhibit smoother and quicker acceleration, and a quieter ride. As the technology continues to mature, further improvements to emissions and fuel economy are expected. Benefits are also expected in the reduction of maintenance costs.

Hybrid Benefits

Hybrids Lower GHGs and Other Emissions

Hybrid vehicles produce fewer emissions than diesels or CNG buses due to their reduced fuel consumption. Depending on the operating conditions, hybrid drive manufacturers are reporting that up to 50% fuel economy improvement can be achieved compared to diesels. It is estimated that, depending on the vehicle and the test cycle (i.e. bus operating conditions), a hybrid bus emits up to 40% less GHG emissions per kilometre than diesels. CNGs emit up to 20% less GHGs than diesels.

GHG emissions (g/mile)

Vehicle Technology	Diesel	CNG	Hybrid
NY Bus Cycle	7,076	5,685-6,602	4,251
CBD Cycle	2,779	2,360-2,809	2,262
Manhattan Cycle	4,268	3,457	2,841
% Reduction from diesel	—	0-20%	18-40%

(Source: NAVC, M.J. Bradley & Associates)

Hybrid buses are also predicted to emit reduced amounts of other pollutants, including particulate matter, nitrogen oxides, volatile organic compounds and carbon monoxides. Under certain operating cycles, manufacturers have reported PM reductions for hybrids exceeding CNG buses.

- Particulate matter - 50% reduction over diesel
- Nitrogen oxides - 36% reduction over diesel
- Volatile organic compounds - 43% reduction over diesel
- Carbon monoxide - 97% reduction over diesel

Noise levels can vary greatly between bus technologies. For every 10 decibel (dba) increase in noise levels, there is a perceived doubling of noise. The electric trolleybus has very little engine noise, a prime reason residents and business in the City of Vancouver favour it. While the absolute noise level of a CNG bus is lower than that of a diesel bus, its frequency causes a resonance that is more perceptible to the human ear. As the hybrid bus engine would be much smaller in comparison to a diesel or CNG, it is expected that the noise level of the hybrids will be noticeably reduced to levels closer to that of a trolleybus.

Relative Bus Noise Levels

Relative Bus Noise Levels	dba
Diesel bus	83
CNG bus	75
Trolley bus	<70
Fuel cell bus	<70
Quiet street	60

Potential to Save Operating Cost

While there is little data on operating costs for hybrid buses in revenue service, there is some evidence of reduced costs due to lower fuel consumption and possibly reduced maintenance requirements.

Hybrid Bus Concept

In this demonstration project, the GVTA will retrofit two decommissioned Ballard bus shells (i.e. engines removed) with diesel/electric hybrid engines to demonstrate the viability of hybrid bus technology in this region. The GVTA also has diesel, CNG and electric trolleybuses in its fleet, which offer a broad range of technologies for comparative evaluation.

These hybrid buses would be the first to be showcased in full-time revenue service operation in Canada. A successful demonstration of hybrid vehicles could offer a bus alternative that is cleaner than diesel for GHGs and regulated emissions, more cost-effective and operationally flexible than trolleys, and more reliable than CNGs, without the requirement for expensive infrastructure.

The retrofit would be conducted by Stewart and Stevenson in Denver, Colorado, currently the only company licensed to retrofit hybrid drives into transit buses. The cost of retrofitting two bus shells will be approximately 50% of the cost of buying two new vehicles, and can be completed in two months rather than the 24 months typical for new hybrid bus delivery.

The demonstration project will be set up to allow the collection of as much data as possible within a short demonstration timeframe. The length of the demonstration will be a minimum of nine months, and may be extended to ensure that the test period includes winter months.

The hybrid bus will be tested primarily on routes that would realize the most benefit from a low emission, low noise vehicle. These routes will primarily be in denser parts of the region, which will enable the vehicle to be tested on routes with long service hours, high levels of ridership and challenging conditions. These include:

- routes in high density urban areas where trolleys are unable to run due to lack of trolley overhead infrastructure; and
- routes with frequent stops/starts that will obtain the most benefit of regenerative power.

To provide a more complete analysis, the hybrid bus can also be tested on longer highway routes and routes with hilly terrain. Measurements of decibel readings will also be monitored over various operating conditions—acceleration, deceleration, and constant speeds, and compared

against other transit vehicles and passenger cars. In order to determine the fullest extent of the vehicle capabilities, it is proposed to operate the vehicle up to 20 hours per day, seven days per week.

At this time, hybrid drive manufacturers are looking for input from transit agencies regarding key performance needs that can be met through modifications to the various drive train controls. The GVTA would explore opportunities with the hybrid drive manufacturer in this regard.

Process and Timelines

The procurement and technical monitoring of the hybrid buses will be managed by the GVTA in cooperation with its bus operations subsidiary, Coast Mountain Bus Company. The GVTA's Marketing Department will conduct a community impact assessment of the deployment of the buses.

The implementation timeline for the Hybrid Bus Demonstration is approximately one year. The bus shells will only require several months to be retrofitted. After the one-year demonstration period, the hybrid buses will be made available to other municipalities within the Province of BC. This will allow other agencies to test these vehicles under cold weather conditions. This will enhance the value of the Showcase to other Canadian cities, which have harsher winters than Vancouver.

It is expected that the buses will continue to be used in regular revenue service after 2005, subject to their feasibility.

Monitoring and Evaluation

Due to the small number of hybrids in demonstration or actual service, operating, maintenance and emission data is not readily available for hybrid vehicles. The GVTA's objective is to demonstrate the viability of the hybrid technology in the region's operating environment with particular emphasis on:

- reducing emissions
- reducing operating and maintenance costs
- optimizing operating performance
- gaining technical expertise prior to larger scale procurement

The project deliverables are to complete analysis, evaluation and reporting for the following:

- Vehicle-specific operational considerations
- Vehicle-specific maintenance issues
- Region-specific issues (e.g. topography, traffic conditions etc.)
- Comparative emission levels

- Comparative noise levels
- Comparative fuel efficiency
- Comparative maintenance costs
- Battery replacement costs and disposal impacts
- Safety considerations
- Infrastructure and equipment requirements
- Employee training requirements
- Public awareness and acceptance
- Life cycle costs under different capital cost assumptions

Measurement of emission and cost benefits will rely primarily on fuel consumption and maintenance costs, and will be compared to diesel, trolley and CNG performance. These statistics will be tracked through the design and establishment of a monitoring program specifically designed for the Showcase. The program may utilize data from existing fleet management systems for comparative purposes.

Measurements of decibel readings will also be monitored over various operating conditions - acceleration, deceleration, and constant speeds - and compared to diesel, CNG and trolley performance under similar conditions.

The deliverables of the demonstration program will assist in determining the capital cost threshold at which hybrids represent good value for the Greater Vancouver region in helping to meet emissions and livability objectives for new bus procurement.

Public Awareness

As with previous demonstration projects, the introduction of hybrid vehicles will also provide a means for raising public awareness of hybrid technology and its benefits. The hybrids are intended to be integrated into service operation, and would be rotated through various transit routes to analyze their abilities under varying conditions. This will also allow a large sample of passengers to obtain first-hand experience with the hybrid vehicles. Opportunities will be provided for transit user input and reaction through on-board surveys. Neighbourhood impact surveys will also be used to monitor perceptions of noise and emissions levels by homeowners and businesses located on hybrid bus routes. The vehicles will also be showcased at various public events, where public reaction will be detailed and gauged.

The vehicles may be distinguished using unique paint schemes and signage. Comparative public perception of the bus with normal livery and hybrid bus livery may also be tested.



Its multiple positive impacts make the hybrid bus attractive vehicle option for urban routes. (Source: Allison Electric Drives, GM Corporation)

Cost

The total costs for the Hybrid Bus Demonstration Project are estimated at \$1.65 million. Including program design, monitoring and marketing costs. This project will be cost shared 2/3 GVTA and 1/3 Transport Canada.

Expected Impacts

Emissions impacts are based on data provided by manufacturers, and the experience of Hybrid pilots in other cities and climates. While these may change due to operating conditions in the GVRD, they are used here to provide an estimate of the potential order of magnitude impacts.

Rough estimates indicate that an average GVTA diesel bus emits 100 tonnes of CO₂ emissions per year. Based on the above comparisons, replacement of one diesel bus with a CNG would eliminate up to 20 tonnes of GHGs per year; replacement of one diesel with one hybrid bus would eliminate up to 40 tonnes each year.

It is estimated that the Hybrid Bus Demonstration could result the following GHG emission reductions:

- Short term, two buses in revenue service to 2006: 120-180 tonnes
- Medium term, two buses in revenue service to 2013: 120-180 tonnes
- Widespread implementation, 50-100% of expansion and replacement buses as hybrid to 2013: 20,000 - 55,000 tonnes

Sharing and Replicability

An important strategic benefit from initiating a demonstration project is that this would allow the GVTA to network with bus manufacturers and other transit agencies in the development and design of a standard commercial hybrid vehicle. Hybrid manufacturers are currently seeking input from agencies operating preview buses for future design enhancements and the importance of features such as the ability to operate in "HUSH" (Hybrid Ultra-Low Sound & Hydrocarbons) mode which shuts off the engine during idling. Allowing the technology to develop without it incorporating similar features to reflect local need could result in costly design changes to a standardized vehicle should GVTA choose to purchase hybrids in the future.

There are also opportunities to partner with other agencies or transit properties to share the operating and maintenance data or alternatively move the vehicles between properties or regions to broaden the operating and maintenance experience. Following the conclusion of the monitoring program, the GVTA would be prepared to offer the hybrid bus on loan or lease to other transit properties that could monitor the vehicle's performance under more extreme climate conditions than are typically experienced in the Lower Mainland. The GVTA has already received preliminary interest from the provincial transit corporation (BC Transit) on such a loan.

Finally, findings from the GVTA's demonstration will be shared with industry, including Canadian Urban Transit Association and the Transportation Association of Canada, as well as through the *Sustainable Region Showcase's* website.

CENTRAL VALLEY GREENWAY



Introduction

Cycling and walking are the healthiest, most efficient and cost-effective alternatives to driving. Getting more Canadians to choose 'active transportation' options provides clear environmental and personal health benefits at low cost to the public purse. Many Canadians say they would cycle or walk more often if accessible, convenient and safe routes were available. Yet the design of our cities and streets tends to make those transportation alternatives unattractive.

Public resources directed to cycling and pedestrian facilities in the GVRD have generally not been commensurate with either their demand or need. Furthermore, prior to the GVTA's creation in 1999, regional-municipal bicycle planning efforts were not well coordinated. The result has been relatively slow, incremental implementation of often basic local cycling facilities, with virtually no larger, well-integrated regional facilities.

The *Sustainable Region Showcase's* Central Valley Greenway (CVG) represents a significant step towards addressing the need for regional bicycle planning in Greater Vancouver. Upon completion, the CVG will be the backbone of the regional cycling network. While the CVG will be designed primarily for cycling, it will also be designed to accommodate a wide range of non-motorized transportation, including jogging, walking, wheelchairs, boarding and blading.

The Greenway's flat, predominantly traffic-separated, 22 km route cuts through the region's designated Growth Concentration Area where the majority of the region's future growth is planned to be located. It links three municipalities, the metropolitan downtown, two regional town centres, major transit stations, key residential and employment areas, schools and post-secondary institutions, shopping malls, several business parks and an emerging "sustainable community" development in Vancouver. It also meets up with 12 other bicycle routes and trails, and provides a focal point for pedestrian and bicycle-oriented development.

As the future spine of the region's cycling network, the route is expected to make a significant contribution to meeting the region's target for increasing bicycle usage from 2% of trips today to 5%. The CVG will therefore have significant GHG benefits—each regular auto commute

shifted to the bicycle leads to a reduction of approximately one tonne of CO₂ emissions annually. Trips shifted from transit are also positive. In a system where the bus system is largely operating at capacity in areas where cycling is most practical and attractive, trips shifted or sustained on bicycle result in lower incremental usage of transit. This reduces the need for bus service expansion and attendant costs and emissions.

There are several notable aspects of the CVG's development process and implementation that will help realize GHG and transportation benefit, while providing for more widespread replicability.

1. True cycling and pedestrian priority. The alignment choice of the CVG reflects a choice of route optimality over the more common choice of route availability. The CVG optimizes conditions for cyclists and pedestrians by blending considerations such as topography, land use, access to key origins and destination, transit integration and suitability of rights of way in the choice of routes. Easements will be negotiated, property acquired and structures built where appropriate to overcome local barriers. The route is woven into the urban fabric, traversing a broad range of conditions from greenfields, to brownfields, to greyfields, using rail, street and park rights-of-way. The result is a Greenway that offers high levels accessibility, convenience, safety, amenity and interest to meet the needs of a broad spectrum of users.

2. Synthesis of best practice in facility planning. The CVG will showcase a range of measures to provide a high level of priority, ease of use, safety, security and amenity for users. Cycling and traffic management measures such as bicycle boxes, textured paving, road capacity reallocation for segregated paths and dedicated bicycle signals will be implemented, monitored and evaluated. The CVG also presents a number of opportunities for habitat enhancement, site remediation, and experimentation with green facility design (e.g. permeable surfaces, drainage/filtration, etc.). Investments in lighting, signage, wayfinding, plantings and other amenities will provide significant functional and experiential enhancements.

3. Partnerships. The process coordination and financial resource requirements of building a multi-jurisdictional regional facility are significant. Transport Canada's UTS Program offers Greater Vancouver an opportunity to

focus financial and planning resources on meeting those challenges. Furthermore, the scope and comprehensiveness of the CVG proposal also reflects the strength of Greater Vancouver's cooperative local-regional governance structure in facilitating such mutually beneficial planning and funding partnerships. Finally, the CVG's development also serves as an example of how corporate and non-profit sector leadership can be critical to the success of public projects. A corporation, VanCity Credit Union, provided \$1m in seed money to advance the Greenway as a priority regional project, while Better Environmentally Sound Transportation (BEST) will play a pivotal role in ongoing programming, promotion and physical enhancement and maintenance of the Greenway.



Most sections of the Greenway route sections do not meet the high standards required to attract utilitarian trips. (Photo: BEST)

Context

Regional Goals and Opportunities

The 1996 LRSP and its supporting transportation plans "place a priority on walking, cycling, public transit, goods movement and then the automobile" and call for actions to "enhance and/or retrofit local streets and infrastructure to favour transit, bicycle and pedestrian uses." Local official community plans also have similar policy guidance and detail supportive action. While progress on these directions has been mixed throughout Greater Vancouver, spending has not generally been commensurate with the investment required to achieve the goals. Progress to date could therefore best be described as incremental.

The creation of the GVTA in 1999 provides an opportunity for accelerated action. A modest, but growing regional cost-share fund for cycling infrastructure has been created to encourage municipalities to expand their cycling programs. The Showcase program provides a further opportunity to augment these funds to build a regional 'hallmark' cycling facility that sets standards for cycling priority and informs future infrastructure development. As an expression of

shifting priorities and a measure of commitment to the project, the municipalities that have committed to fund the CVG as part of the Showcase have reallocated significant capital funds from already tight budgets.

Cycling's Current Status

According to the 1996 census journey to work data, cycling represents roughly 2.7% of work journeys made in Greater Vancouver. Some areas of the region have bicycle mode shares in excess of 10%. The GVTA's 1999 Regional Travel Survey shows 25% of people made a utilitarian trip by bicycle over the previous 30 days, indicating a broad interest in cycling amongst residents.

Between 1994 and 1999, the bicycle's share of trips (24-hour) doubled regionally, with most of the increase observed in the urban core (e.g. the City of Vancouver's bicycle share tripled). This has been in response to changing demographics and better land use in part, but most significantly to improved facilities.

To put the numbers in perspective:

- The number of daily bicycle commutes is equivalent to 220 bus loads of people, or one-fifth of the region's bus fleet;
- The total number of daily bicycle trips in the region is equivalent to the number of passengers carried on the SkyTrain system;
- If all the City of Vancouver's bicycle commutes were done by automobile, peak period auto traffic would increase by 8,000 vehicles (5-6% higher) on some of the region's most congested roads

Most Bike (and Car) Journeys Are Short

Cycling is most competitive for journeys under 10 km, and especially so for those under 5 km (a 20 minute trip at a moderate pace). Approximately 78% of all bicycle journeys to work are 5.9 km or less. By comparison, approximately 28% of car commutes are under 5 km and another 27% are



Pedestrians and cyclists often have little choice but to use poor quality paths, such as this one parallel to SkyTrain



Cyclists traveling along one existing portion of the Greenway, over Still Creek Bridge in Burnaby. (Photo: BEST)

between 5 and 10 km. This large share of short car trips represents a substantial potential market for cycling. By shortening bicycle trip distances and reducing travel times, the CVG is well positioned to dramatically increase the number of car journeys that can be easily be made by bicycle in the region's core.

GVTA studies indicate that Greater Vancouver can potentially raise its cycling mode share to 5% of trips (or more) given supportive policies, infrastructure, programs and land use.

Greenway Planning in Vancouver Region

In recent years, the GVRD has developed a conceptual 'Regional Greenways Vision' that identifies almost 800 kilometres of trails, pathways and corridors for transportation and public recreational use, with the CVG as the backbone. Regional planners originally anticipated at least a 20-year build-out for most of the proposed greenway network. The *Sustainable Region Showcase* will provide for early implementation of the Greenway network's most critical link.

Greenway Development Process

Various individual sections of park, rail and street right-of-way in the Central Valley corridor have been under active consideration for the development of bicycle facilities for the past 25 years. However, it was only recently with the development of the Regional Greenways Vision, the construction of the Millennium SkyTrain line and completion of Vancouver's Downtown Transportation Plan that the CVG was established as a regional priority.

Partnerships Formalized For Showcase

As part of the development of the Showcase Greenway proposal, a CVG working group was established involving planning staff from the GVTA, the GVRD, the Cities of New Westminster, Burnaby and Vancouver and BEST. This

VanCity Award Raises CVG Profile

A local non-profit organization, BEST, has been instrumental in formalizing the regional concept of the CVG and raising its profile as a regional infrastructure priority. In 2001, BEST's proposal to expedite the planning and implementation of the CVG was selected as the first recipient of VanCity's \$1 million Community Award by credit union members. The award generated considerable public, corporate, media and government interest in the Greenway and helped secure subsequent political support through a substantial (and unprecedented) municipal funding commitment for the initiative.

working group has conducted extensive conceptual and technical work since the Showcase proposal was shortlisted in December 2002. Should the project receive Showcase funding, further public involvement will be undertaken including community-based workshops and charrettes to refine alternatives.

Partner agencies and organizations each have distinct roles in the planning, funding, implementing and marketing the CVG.

- GVTA is primarily responsible for providing technical assistance, planning coordination, project monitoring and evaluation and cost-share funding to municipalities (subject to meeting criteria);
- GVRD will plan, design and construct sections of the Greenway (in New Westminster) where its Parks mandate is met;
- Cities of Vancouver, Burnaby and New Westminster will play lead roles in planning, designing, cost-share funding and constructing their respective sections of the CVG, and managing related public process;
- BEST will be responsible for developing and managing community involvement programs, coordinating the CVG working group, marketing and promoting the Greenway and providing capital funding to municipalities for "value added" infrastructure. BEST's role will be ongoing after the Showcase period.

Greenway Concept

A Ride Down the Central Valley

Cutting through the heart of the Vancouver Region, the Central Valley Greenway is a flat, direct and accessible 22km pathway that is predominately separated from road traffic. Starting in Vancouver, the Greenway runs from the downtown core, to False Creek and the Seawall, Science World, and the sites of the proposed Olympic Village and

Southeast False Creek Sustainable Community. Minutes away are Granville Island and several high-density neighbourhoods. From False Creek, the Greenway moves east through active railway lands into East Vancouver and along the Millennium SkyTrain alignment towards Burnaby.



The False Creek Flats poses significant topographic and access related challenges for cyclists accessing Downtown Vancouver.

Entering **Burnaby**, the route serves job-rich industrial and office parks and then connects to a major retail and high-density population centre at Brentwood municipal town centre. From there, the CVG moves alongside waterways in a traffic-separated path through an industrial area with sweeping views of Burnaby Lake. It then connects to several established neighbourhoods and enters the beautiful Brunette River ravine.

Entering **New Westminster**, the route winds through Hume Park, then along a pathway that runs beside the Millennium SkyTrain Line and Braid Street to the city's evolving waterfront. It then enters downtown New Westminster along the main downtown street, Columbia, where traffic lanes will be reduced to convert the City's main thoroughfare to a Greenway.

A more detailed description of the CVG alignment and features can be found in Appendix D.



In Burnaby, parts of the Greenway will run through industrial areas as well as high-density town centres. (Photo: Gordon Price)

Building the Central Valley Greenway

The Greenway is characterized by six key development themes that make it an ideal transportation facility and Showcase.

1. Facility routing and design reflects priority for users

The Central Valley Greenway has been designed to meet the needs of cyclists of all levels. The route is predominantly traffic-separated with wide pathways to accommodate a range of users and to address both real and perceived safety concerns that often present barriers to usage. Traffic separation will keep the number of intersections along the route to a minimum. In fact, the CVG will reduce the number of intersections along the 22 km route by 50%. This will not only save significant amounts of travel time for Greenway users, but also enhance cyclist safety, as intersections are the primary location for bicycle accidents. Where intersections remain, cyclist activated signals and other special intersection treatments will ensure safe passage and high visibility. Intersection closures and bicycle priority will result in the removal of some roads from the truck network and some lane closures for cars.



Cyclists traveling the Brunette River stretch of the Greenway in the City of New Westminster. (Photo: BEST)

City	Intersections		Reduced intersections	
	Existing	Greenway	Number	%
Vancouver	35	19	-16	-46%
Burnaby	24	12	-12	-50%
New Westminster	25	8	-17	-68%
Overall	84	39	-45	-54%

Routing decisions have been made to keep grade changes to a minimum to reduce both real travel time and perceptions of distance. In Vancouver a bicycle/footbridge will be built to avoid rail tracks and moderate grades in the transition from the Grandview Cut escarpment to the False Creek Flats. This is one shortcut alone will save users several minutes in travel time.



Vancouver

Western start/end Downtown Vancouver/ False Creek Transport Hub

The westerly start/end of Showcase CVG is a 'transport hub' with links to Vancouver's downtown peninsula. Existing ped/bike facilities to be further upgraded and extended by City of Vancouver. Future site of Sustainable Community and 2010 Olympics Village site.

CONNECTS TO:

Bikeways/Greenways: Parkway, Seaside, Ontario, Adanac, Heather
Transit: Main St. Bus Corridor, SkyTrain Station, Heritage Streetcar, Pacific Central Station, False Creek Ferries; AquaBus
Destinations: CBD, Science World, Chinatown, Gastown, Yaletown, Stanil Park, Granville Island, BC and GM Place Stadiums



- 1 False Creek Flats** (Science World to Clark Dr.), 2 km
Multi-use path separated from traffic. A gateway bridge crosses the rail line and industrial lands to the top of the Grandview Escarpment.
CONNECTS TO: SkyTrain at Vancouver Community College and developing post-secondary research campus in the Flats.

- 2 Grandview Corridor** (Clark Drive to Slocan St.), 2 km
Separated multi-use path plus sections of bikeway on traffic calmed street. Travels along Grandview Cut and under SkyTrain guideway. Links dense residential neighbourhoods and Showcase Transit Village project at Commercial/Broadway Station.

- 3 Rupert/Renfrew Rail Route** (Slocan St. to Boundary Rd.), 2 km
Multi-use path separated from traffic through industrial area. Follows new Millennium SkyTrain. Parallels existing BNSF freight railway.
CONNECTS TO: Renfrew and Rupert Stations

Burnaby

- 4 Still Creek** (Boundary Road to Sperling Avenue), 4.5 km
Traffic-separated multi-use path follows Still Creek. Western segment runs through new office park development, with central sections through older light industrial area. East portion follows hydro service lane through forested parkland near large regional sports complexes.
CONNECTS TO: Brentwood Town Centre (and SkyTrain Station) and British Columbia Institute of Technology

- 5 Burnaby Winston St.** (Sperling Avenue to Cariboo Place), 4.5 km
New path along north side of current street right of way. Area has both residential and light industrial land uses. Multi-use path separated from traffic with landscaped buffer and median.
CONNECTS TO: Simon Fraser University and SkyTrain

- 6 Burnaby Brunette River** (Cariboo Place to North Road), 2 km
Multi-use path moves into forested Brunette Conservation Area through quiet parkland setting, canopy of trees and riverside trail.

New Westminster

- 7 Hume Park** (Hume Park to Braid St.), 1 km
Multi-use path winds along Hume Park and enters a light industrial district. Scenic views for riders over the Brunette River. Safer access into Braid SkyTrain Station.

- 8 Braid Industrial Way** (Braid St. to Cumberland St.), 1.5 km
Path winds through industrial area with few current walk/bike facilities. Major enhancements include new sidewalks, on-street bikeway, boulevard walkways and new pedestrian bridge over Brunette channel.
CONNECTS TO: Columbia Hospital and Braid and Sapperton Stations.

- 9 Columbia St.** (Cumberland St. to Westminster Quay), 2.5 km
Multi-use traffic-separated path set on north boulevard of major road situated along residential area. Route transitions to redesigned Columbia St. in heart of downtown New Westminster. CVG route will feature walkways on each side, new on-street bike lanes, median boulevard and removal of two traffic lanes to reinforce and enhance "high street" character of major commercial area.

Eastern start/end: Westminster Quay

CONNECTS TO: Westminster Quay/Public Market, New Westminster CBD, Pattullo Bridge to Surrey, and Local bike routes/regional trails.

The CVG will also be designed to accommodate other active transportation modes and recreational uses and to minimize conflicts between cyclists and pedestrians. Considerable attention will also be given to the qualitative factors that improve user experience. Standardized signage, information kiosks and wayfinding measures will help users find their way. Public art, public spaces, benches and plantings will help build a sense of place, while lighting will improve safety and comfort.

2. Integration with key rapid transit, bus and bicycle facilities

Vancouver, Burnaby and New Westminster have each been building bicycle networks incrementally over the past number of years. However, major network gaps and physical barriers exist for cycling east-west through the Central Valley Corridor. Not only will the CVG fill these critical gaps in the cycle network, but it will also make important connections to a number north-south bicycle routes, as well as multiple bus routes (most equipped with bicycle racks) and SkyTrain stations to be equipped with secure bicycle lockers. The GVTA is finalizing preparations to permit bicycles on board SkyTrain vehicles, making such facility integration even more beneficial. In total, the CVG makes nearly 30 connections to bus or rapid transit services capable of accommodating bicycles as well as 25 bicycle routes.

Pedestrian catchments for SkyTrain stations are typically in a 500m radius of stations. However, these catchments can increase with better facilities that improve perceptions of safety or distance. With the high density of key origins and destinations on the corridor, walking (and other active transport modes) will also be used for intermediate distance travel of 1-3 km.

Greenway links	Vanc.	Burn.	N.West	Total links
SkyTrain Stations	4	3	4	11+
Bus routes w/ racks	5	8	10	23+
Bicycleways/routes	5	6	5	16+
Urban Trails/Seawall	2	6	3	11+

The Route Today and Tomorrow

Before:



After:



This 1.7 km section of the CVG on Grandview Highway was built in conjunction with the construction of the Millennium SkyTrain Line. It is the only section of the CVG built to standards proposed in this Showcase. Over 20km remain to be built for the CVG to be functional for transportation. (Photos: Gordon Price)

In many ways, the CVG is to the cycling and pedestrian network what rail transit is to the transit network. It acts as a collector to facilitate short journeys between key population and employment nodes along the route, while serving as an efficient "limited stop" route for longer-haul trips, minimizing stops and delays.

3. Maximizing accessibility to key destinations and serving the metropolitan core

Of the 21 municipalities in the GVRD, the three connected by the CVG route are the most compact and urbanized, have the highest walk and bicycle mode shares, and are the



Renfrew SkyTrain is just one of the 11 connected to the Greenway's proposed route. (Photo: BEST)

municipalities with the greatest potential for future bicycle mode share growth. They feature designated regional and municipal town centres (transit-friendly areas of concentrated residential and commercial development), as well as many other smaller residential, commercial, retail and institutional nodes. They also form a significant portion of the region's designated Growth Concentration Area. The CVG runs through the centre of these municipalities, providing access to key existing and future origins and destinations (see CVG Map, page 28-29).

The 2001 Census shows that the CVG cycling and pedestrian catchment is significant. Between 8% and 9% of the region's population and employment are within 750m ride (2 minutes) of the CVG and 15% are within a 1.5 km ride (3-4 minutes). With significant future growth slated for the corridor, its potential is even greater.

CVG Has a Sizeable Market Within Easy Reach

	Population		Employment	
GVRD	1,987,000	100%	996,000	100%
CVG < 750m	162,075	8%	88,305	9%
CVG < 1.5km	293,767	15%	154,280	15%

4. Environmental improvement through remediation and enhancement

The Greenway traverses a wide range of urban, park and wetland environments - brown fields, green fields, grey fields and rail and street rights of way. While this diversity will be an asset in terms of user interest, it also offers challenges and opportunities in terms of the environmental impact of the facility. There are contamination issues related to decommissioned rail and industrial lands. These will be addressed either as part of the construction of the Greenway itself, or by the private sector through redevelopment of adjacent properties. There are also fragile envi-

ronments through which the CVG will pass. Here the CVG will be designed to either mitigate its impacts (e.g. using different techniques and materials for paving, trail building or drainage) or will make improvements to pre-existing facilities. Finally, the creation of the CVG offers opportunities to reinforce the image and function of the Greenway as a community asset. New greenspace, local parks and public spaces, public art and the reintroduction of native flora will provide opportunities for communities to become involved in local stewardship activities and help build a constituency for more high quality greenways in the region.

5. Strong partnerships in the private, non-profit and public sector

As the region's first multi-agency transportation project involving the public, private and non-profit sectors, the CVG is an important testing ground for new models in funding, planning, constructing, promoting and maintaining regional cycling facilities.

The partnership between the GVTA, GVRD and the three municipalities and the associated Regional Working Group will also provide lessons on how to avoid many of the funding and co-ordination obstacles that may challenge similar inter-jurisdictional projects including, inconsistent standards integration with transit and uncoordinated phasing. With the involvement of BEST and VanCity, the partnership will also serve as a test of how corporate and NGO leadership can act as a catalyst for change (see VanCity article in Appendix C).

Private Partnerships Add Value

The westernmost section of the Greenway presents an opportunity to create a landmark architectural feature, a bicycle/foot bridge leading down from the Clark Street Escarpment towards the site of the Southeast False Creek Sustainable Community and proposed 2010 Olympic Village, opening sweeping views to the downtown core, North Shore and False Creek. The current Showcase budget has provision for a basic structure built to engineering standards. As part of its corporate capital campaign, BEST will seek to raise additional private capital to augment public funds to lend the structure architectural and aesthetic merit befitting its gateway function.

6. Testing innovations in facility design

Development of the CVG will permit a number of innovative environmental impact, traffic safety and community safety design features to be tested, monitored and evaluated. These measures include:

- Conversion of downtown New Westminster's main thoroughfare, Columbia Street, from a busy arterial to a greenway by reallocating traffic lanes to bicycle path and boulevard space.
- Removal of sections of Grandview Highway North in Vancouver from the designated truck network and its conversion to bicycle-only access;
- Naturalization of previously paved areas, including the potential piloting of new street designs using alternative curb design, drainage infrastructure, street layout and native plantings to reduce stormwater runoff impacts; and
- The use of coloured bicycle lanes, new lighting technologies, permeable paving surfaces in park areas, and "bicycle boxes" which place bicycles at the "head of the queue" at intersections, among other measures.

Process and Timelines

To date, there has been substantial conceptual and high-level cost development of the CVG project. Further public consultation work to define options and preferences and some detailed costing and technical feasibility remain to be done before construction commences. The schedule reflects the need to begin the public process late in 2003 so that final designs and alignments can be approved by Spring 2004, with the majority of construction to be completed by late summer 2005, thereby allowing sufficient time for monitoring and evaluation.

Section 6 provides a high-level implementation timeline for the CVG. Further detail on implementation schedules for individual municipalities and CVG sections is available.

Monitoring and Evaluation

Determining whether the general CVG approach or specific measures piloted should be replicated requires both quantitative and qualitative evaluation. Data collection will be done by both municipal and regional staff and coordinated by the GVTA.

To determine the CVG's success in facilitating a modal shift to active transportation, thereby realizing related GHG emissions and improving area livability, the monitoring and evaluation program will collect quantitative and qualitative data using the following methods:

- Cycling, pedestrian and other active mode counts on existing route and parallel corridors (before and after)
- Motor vehicle counts on existing route and parallel corridors (before and after)
- User "experience" surveys to test previous mode choice, trip type, usage levels, attitudes and preferences

- User focus groups
- General public attitude and preference surveys
- Augmentation of sample size in the GVTA's Trip Diary Survey along the corridor, plus post-implementation follow up survey
- Before/after accident data, with focus on pilot projects
- Bicycle/transit usage (locker and bus rack usage rates)

An important outcome of the qualitative research will be an understanding of changes in user and community perceptions of safety, comfort, ease of use and neighbourhood impact, as well as an understanding of the comparative differences between the CVG and conventional bicycle facilities (i.e. relative benefit of incremental level of investment in better facilities).

Cost

The total cost for the CVG is approximately \$14.3 million, including capital, program and in-kind costs. Costs break down to a roughly 1/3 cost share (regional, federal, municipal) for sections in each municipality. BEST's contribution is approximately \$452,000 over the Showcase period. In recognition of the fact that VanCity's \$1m contribution is not sufficient to build significant portions of the greenway, the BEST funds will be used to establish a Greenway endowment to:

- Endow a \$360,000 Greenway Trust for the ongoing stewardship of the CVG, including maintenance and promotion;
- Commence a capital campaign aimed at generating a further \$2 million in corporate and community support; and
- Fund "value-added" infrastructure (e.g. benches, lighting, plantings, kiosks, signage).

At the time of writing the proposal, a "waterfront" route was proposed as an alternative in New Westminster, but was not sufficiently well-defined for inclusion in the Showcase. Should this route prove feasible later in 2003, an additional contribution of \$800,000 will be made by the GVRD towards its construction.

Expected Impacts

Given the quality, connectivity and broad geographic coverage of the CVG, and the demonstrated latent demand for bicycle facilities in the region, it is expected that there will be a significant mode shift for a wide range of local and long haul journeys.

The GVTA's regional transportation model is not sufficiently equipped to forecast changes in bicycle usage in response to new infrastructure. The project team has there-

fore relied on existing travel patterns, catchment population and employment, the precedents of other cycle facilities in generating usage and characteristics of the facility (e.g. travel time reductions) to estimate potential usage.

It is estimated that the CVG will result in the following decreases in GHG emissions:

- **Short term** (2006): 1,200 - 1,500 tonnes
- **Medium term** (2013): 6,000 - 7,000 tonnes
- **Widespread implementation** (2013): 30,000 - 100,000 tonnes (assumes six regional and local greenways built to CVG standards).

Other benefits include:

- Reduced traffic congestion
- Reduced transit operating and capital cost
- Reduced accident rate (potentially up to 50% based on intersection reduction alone)
- Improved perception of safety
- User and public cost savings
- Improved image of active transportation as a viable personal transportation choice
- Improved image of greenways as a public amenity
- Significant progress in giving effect to transportation priority policies
- Tourism enhancement

Sharing and Replicability

While the CVG is expected to have significant GHG benefits unto itself, the real benefit is in replicating it as a model for more wide scale implementation. Numerous regional and local plans call for a manifold expansion in bicycle facilities. However, few regional bicycle facilities have been built to the standard the CVG proposes. Demonstrating the benefits of such a facility in achieving mode shift and reducing GHG emissions will help set standards and benchmarks for the development of future facilities. This is certainly the case in Canada at-large, but especially so in the GVRD where an additional 935 km of bicycle facilities are expected to be built and where there is relatively little experience in building high quality regional cycling facilities.

Various pilot projects along the Greenway's route will provide information on the effectiveness of a range of treatments in addressing site-specific challenges. A Best Practices Guide summarizing the experience of these will be produced, with recommendations incorporated into regional bicycle guidelines as appropriate. In this regard, the Showcase program provides an opportunity for the CVG to be used as a testing ground for a range of innovations in facility design that will be evaluated for their more

widespread implementation.

Disseminating information regarding the CVG experience will be critical to ensuring replicability of its benefits. This will be done by:

- Building a capacity within the community to assist in building appropriate facilities through active involvement in the design process;
- Publishing a Best Practices Guide for greenway facilities
- Developing Regional Greenway Design Guidelines;
- Distribution of Best Practice report and Design Guidelines locally and nationally; and
- Regular reporting on CVG progress and experience through industry conferences, including the Pro Bicycle/Walk conference (bicycle and pedestrian planning professionals) to be hosted in Victoria, BC in 2004.

SECTION 3.4

TRANSIT VILLAGES

Introduction

The typical walking "catchment" for a rapid transit station extends approximately 500m to 800m from the station. For cycling, this extends to 2km or more. However, people often perceive these distances to be much further because of poor or unsafe pedestrian environments, lack of development in the station area and prevalence of auto-oriented development where development does exist. The Transit Villages project aims to reduce private vehicle use and increase transit use, cycling and walking in three SkyTrain station precincts. The underlying organizing concept for this module is that a focus on a combination of place-making, physical station area improvements and increased station precinct development can bring the ridership goals of GVTA and the livability goals of the host community together.

The objective is to create an attractive compact, mixed-use community centred around a transit station that, by design, invites residents, workers, and shoppers to drive their cars less and use green modes such transit, walking and biking more. This will be accomplished through participatory planning processes that will lead to immediate infrastructure investments (which enhance precinct accessibility and design), as well as the development of integrated plans for longer-term land use change.

Research shows that successful rapid transit systems generate a large proportion of their ridership from people walking and cycling to the station. Transit-supportive land uses and a pleasant and safe pedestrian and cycling environment are key elements in a successful station. In Greater Vancouver, there is significant potential to increase work, shopping, and personal trips within the station precinct areas and to stations to access other regional destinations. In many neighbourhoods, the SkyTrain stations are viewed as a "back door" to the community and generally not a highly valued asset. This is particularly the case for the SkyTrain "Expo" Line, built in 1986, which did not have a strong focus on urban design or land use integration. This project will see three stations transformed into a "front door" and a hub for the surrounding neighbourhood.

Showcase Development Process

The partners for this project will be the GVTA, the GVRD, the municipalities of Vancouver, Burnaby, and Surrey, and

possibly the City of New Westminster. Simon Fraser UniverCity Community Corporation will partner on the Community Pass program. There will be community and local business involvement at all stages of this project to ensure that works and improvements are beneficial to the host neighbourhood.

Transit Villages Concept

The project will include:

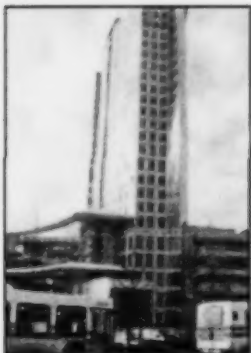
- **Short term measures:** low-cost measures such as sidewalks, traffic calming, safety and security improvements, signage, lighting, signals and signal priority, crossings, bus shelters, street furniture, bicycle lockers, etc.;
- **Medium term measures:** those which require greater consultation, policy coordination and integrated planning such as bicycle routes, new local transit services, bylaw changes, etc.; and
- **Long term measures:** those that require policy changes, amendments to OCPs or Area Plans, and planning for major capital items.

The three pilot stations selected include Surrey Central, Metrotown (Burnaby) and Broadway/Commercial (Vancouver). These three station precincts will permit a demonstration of the varying approaches to addressing different land use contexts, development stages and transportation challenges. In addition, a small pilot project at a new community adjacent to Simon Fraser University in Burnaby is proposed.

Surrey Central Station is located in one of the region's designated regional town centres and is one of the four stations that serve the City of Surrey, a city of 350,000 and one



Predominantly low-density, auto-oriented development surrounds Surrey Central SkyTrain Station.



The newly constructed tower located adjacent to Surrey Central SkyTrain Station offers hope as a catalyst for further development in the area.

of the fastest growing municipalities in Canada. The population of Surrey is projected to increase by about 10,000 per year for the next 20 years. This area serves as the "downtown" for Surrey. At present daily SkyTrain boardings are less than 5000 per day. Only about 10% of the workers in Surrey Central use transit to get to work, while about 24% of the residents use transit to access work. There is considerable potential to increase ridership in Surrey Central for work and shopping trips.

The proposed precinct improvements will build on the momentum being generated by a new high rise office building and the new Simon Fraser University Surrey Campus, immediately adjacent to the station. Surrey is proposing to take a comprehensive look at land use plans, economic development, safety and security measures, urban design guidelines, public realm improvements, and pedestrian, cycling, bus, and private vehicle circulation.

Metrotown Station is in Burnaby, a municipality of almost 200,000 people, and centrally located within the Vancouver region. The Metrotown station is one of the busiest in the entire transit system with 11 bus routes terminating there and over 21,000 boardings per day. The largest shopping complex in British Columbia is steps away from this station. For residents living in Metrotown,



Strip mall development and large amounts of surface parking make the streetscapes of Surrey City Centre less attractive to pedestrians.



Metrotown has a concentration of mixed land uses and high density development, but access challenges for cyclists and pedestrians.



Metrotown has one of the largest concentrations of office space outside of Vancouver's Central Area.



Access to Metrotown Station is substandard.

31% take transit to work, and 12% of the residents walk to work, while 20% of those employed in Metrotown take transit.

Over 25,000 people now live in Metrotown and residential growth continues to be strong. Currently there are about 12,000 jobs. In the longer term, it is hoped that more jobs will be attracted to locate within the town centre and therefore reduce the number of jobs located in car-dependent locations elsewhere in Burnaby.

There are a number of issues associated with current access to the SkyTrain that if solved can improve the transit experience of existing riders and attract new riders. A possibility exists to partner with the shopping centre owner to improve SkyTrain access. The existing facilities are under-designed to accommodate current pedestrian traffic volumes. The Showcase project will review connections to the Metrotown SkyTrain station, additional opportunities will be identified for pedestrian and bicycle linkages through the area and recommendations made for improvements including bike routes, better pedestrian access to nearby neighbourhoods, signage, lighting, street furniture, bike racks and lockers.

Commercial/Broadway Station is in the City of Vancouver, the largest city in the region with a population of 550,000. It is the busiest station in the system with about 25,000 boardings per day and is the intersecting station of the two regional SkyTrain lines. The busiest bus line in the region, the 99B with over 25,000 riders per day, terminates at this station. With the introduction of the University Transit Pass system in September 2003 at University of British Columbia and Simon Fraser University, transit ridership through this station will increase significantly. Transit ridership in the neighbourhood is high and the predominant land use within the 800 metre station catchment is residential but there is some retail and service activity surrounding the station.



The older Broadway SkyTrain Station sits immediately south of the newer Commercial Station now forming one of the region's top three transit hubs.

Land use and urban design plans were recently updated in this area and will not form part of this station precinct Showcase project. The Millennium Station on the north side opened in 2002 and incorporates many transit-friendly design aspects. However, the old station built in 1986 for the Expo line needs significant improvement. The focus will be on making the station and the station area an asset to the community.

Safety and security concerns will be examined, as will ways to make the south station structure more attractive, and opportunities to redevelop a key adjacent property. The GVTA and Coast Mountain Bus Company in collaboration with the City of Vancouver will look for ways to improve bus loading logistics such as all-door boardings. Methods to improve customer information and amenity will also be explored. Cycling access to the station is poor from some directions. The Central Valley Greenway will help address that problem, along with planned bike rack and bike locker facilities. There appears to be a strong latent demand for bike/transit trips at this location, and related improvements will be examined as part of the station precinct project.

One significant departure from "business as usual" is the fact that an significant amount of new retail space was recently developed at the north Commercial/Broadway station (Millennium line) with no parking. In recent months, tenants have occupied most of the space, including a large drug store. A reduction in parking can lead to less car use, a more pleasant pedestrian environment, and also significant development costs savings. The success of this development will be monitored and parking standards will be re-examined for all the station areas.

UniverCity is a new community that will eventually house 10,000 people adjacent to the Simon Fraser UniverCity campus in Burnaby. Construction began in 2003. The design concept of this new community is very similar to a transit village—compact, pedestrian-oriented, local shops and services, reduced parking provisions, and a good cycling network. While not directly located at a SkyTrain station, it is very well served by a frequent bus shuttle to the Production Way SkyTrain station. Simon Fraser UniverCity Community Corporation has offered their new community project as part of the Showcase proposal. They feel it is important that from the very early days



Located next to Simon Fraser University on Burnaby Mountain, UniverCity is a large planned community that will be developed over the next 15 years.

"If they could bomb the old station and the CIBC," neighbour Nicky Pavitt declares, "it'd be okay with me."

(Source: "A tale of two stations", by Sean Rossiter, Vancouver Sun, March 1, 2003)

In addition to the stations listed above, the **City of New Westminster** has recently indicated strong interest in preparing comprehensive transit-oriented development plans for their five SkyTrain stations. They have already initiated planning studies for these stations. In the early stages of this module, all stations listed above will be re-evaluated to determine where Showcase funding can be most cost-effective in reaching program objectives.

Process and timelines will vary for each station and will be worked out in detail at the beginning of the project. In some cases, no additional land use planning will need to be undertaken due to recent work in the area. In other instances, some municipalities have expressed a desire to start with a clean slate and rethink their urban design and land use plans. The latter case will require more time to go through a full community process. In all instances, ways to make short-term improvements will be investigated.



Transit riders entering Broadway Station must make their way through an awkward and unpleasant side alley which doubles as a parking lot most days.



Commercial Station's retail development illustrate the kinds of amenities lacking at the older Broadway Station

Monitoring and Evaluation

The main source of information will be "before, during, and after" surveys. The surveys will determine mode split for residents, workers, and shoppers. Qualitative surveys will be done to determine what types of problems need to be addressed at each of the stations and what the obstacles are to increased use of transit, walking and biking. Evaluation will centre on mode split changes, but also attempt to document qualitative improvements to the built environment, including development activity, number of parking stalls, etc. The change in number of residential units and commercial floor space within 800 metres of the station will be important indicators. GHG emission reductions will be calculated from mode shift changes.

Cost

The total cost of this module is approximately \$10.5 million for three station precincts. These costs will be shared between the GVTA and member municipalities. At some of the stations, there are Business Improvement Associations which have the ability to float levies for additional property taxes dedicated to specific public realm improvements that would benefit local businesses. It is anticipated that once planning studies begin, some businesses or business associations will be interested in sharing costs on aspects of the project. This avenue will be explored during the early stages of the project. UniverCity will make a cash contribution of \$50,000 to help develop the Community Pass system at Simon Fraser University.

Expected Impacts

This module is expected to have the following benefits:

- a reduction in GHG emissions;
- an increase in transit ridership, cycling, and walking;
- an increase in the efficiency of SkyTrain and buses;
- an improvement in safety, circulation, accessibility and physical environment in and around the stations;
- increased building activity, reduction in parking requirements; and
- capacity-building for joint problem solving and "station stewardship" among the host municipality, the transit authorities and neighbourhood residents and merchants.

Sharing and Replicability

Many communities across Canada can benefit from adopting similar coordinated transportation and land use planning processes for mixed use 'transit hubs', either for bus or fixed rail. Having the projects running simultaneously will offer opportunities for experimentation and comparison.



A transit-oriented development is a compact, mixed-use community centred around a transit station that, by design, invites residents, workers, and shoppers to drive their car less and ride transit more.

GOODS MOVEMENT EFFICIENCY AND GHG STUDY



Introduction

Freight and goods movement in the Vancouver region has recently been taking on a higher profile in light of its importance to the regional economy and the competition for scarce transportation resources between freight and passenger traffic. Traffic congestion that adversely affects goods movement is seen as a bonafide threat to Vancouver's role as a gateway city. Inefficient goods movement also leads to high fuel costs and GHG emissions.

Goods transportation accounts for approximately 35% of the region's GHG emissions from transportation sources. However, relatively little is known about the flow of inter- and intra- regional freight movements, or the range of policy, technology, infrastructure, logistical and modal shift measures that can improve the effectiveness and efficiency of goods movement, and reduce GHG emissions and energy use.

The GVTA recently completed the first truck freight study in 20 years. This information now needs to be incorporated into the regional transportation model and used to help develop plans and policies that will make freight transport more efficient and effective, and reduce GHG emissions. At the same time, there is a need to identify a range of non-logistical and infrastructure measures to reduce GHG emissions from freight (e.g. technology, incentives, road priority measures, etc.).

It is also notable that the GVTA is currently preparing its Long Range Transportation Plan, which will be completed and adopted by March, 2004. Freight and goods movement policies and actions will form a major part of the new Plan. This Showcase Program could both inform and complement these policies and actions.

Context

The importance of freight and goods movement to the regional, provincial and national economies cannot be overstated. Within Greater Vancouver, one out of five jobs are transportation-related. More importantly, new and existing businesses view the transportation system as either an asset or a liability in business-related decisions. With Canada's largest port, a strategic location on the Highway 99/Interstate 5 trade corridor and the growing importance of Vancouver International Airport, Greater Vancouver is a critical freight transportation hub and trans-shipment

point for the Pacific Rim and beyond. Clearly, then, freight and goods movement is one of the key roles of the regional transportation system. The volume of freight transported through the region's gateway facilities is estimated at 100 million tonnes annually. The 1999 Lower Mainland Truck Freight Study found that there were an estimated 187,000 truck trips in the Lower Mainland every weekday. It is also known that goods transportation accounts for approximately 35% of the region's GHG emissions.

To illustrate the extent of the challenge facing cities with respect to goods movement, at least 15 of the world's leading cities are currently developing strategies to deal with goods movement on a priority basis (*Moving Goods in the New Economy, A primer for urban decision makers*, HRDC and Transport Canada, 2001). This is an emerging field, with major issues and solutions regarding goods movement just beginning to be understood. With commercial traffic and the general public competing for the same scarce transportation resources, the ability of shippers and logistics specialists to meet deadlines is an increasing challenge. Production methods employing Just-In-Time (JIT) delivery schedules demand that transportation systems operate in an efficient manner with minimal delays.

For urban areas, the challenges faced by the movers of goods is to provide goods to more people and more businesses in a way that is cleaner, quieter, safer and more cost-effective.

To date, freight and goods movement has not been given a high priority in the planning of the regional transportation system. As a result, there is a lack of information and data regarding the 'state' of freight and goods movement



Timely and efficient goods movement is critical to the region's economy.



The impacts of goods movement within Greater Vancouver are especially felt by residents living along designated truck routes.

in Greater Vancouver. Therefore, as a first step, there is a need to better understand goods movement in the Vancouver region, before policies to improve its efficiency can be considered.

The high freight volumes, vehicle movements and GHG emissions pose the question of how can freight and goods movement be supported in a sustainable manner. There is also the related issue of what are the best policy, technological and other tools that can be applied to improve the efficiency of freight and goods movement in the region, and as a corollary, reduce GHGs.

Goods Movement Concept

The Goods Movement Showcase will be comprised of a comprehensive study of freight and goods movement in the Vancouver region, with an emphasis on current and emerging approaches that can increase the efficiency of the movement of goods and reduce GHG emissions from goods movement sources.

It is proposed that the Showcase have the following key components:

- 1. Surveys and interviews with major goods movement stakeholders:** This step is intended to provide a better understanding of goods movement logistics in the Vancouver region. It is proposed that input be solicited from major terminal and gateway facilities, major shippers, GVRD municipalities, etc., focusing on the characteristics and complexities of goods movement in the region, including goods distribution from the ports, redistribution centres, truck trip chaining and key origins and destinations.
- 2. Improve and refine the truck transport model developed by the 1999 Lower Mainland Truck Freight Study:** This step will incorporate the truck transport model developed by the 1999 truck study into the

regional transportation model. The improved truck model will be used as a tool for evaluating the effectiveness of various alternative strategies for improving freight and goods movement in the region.

- 3. Research and inventory best practices:** This step will research the best practices regarding current and emerging approaches to urban goods movement being used or proposed in other cities, and evaluate their potential application to Greater Vancouver. Some of the best practices include measures to reduce the number or length of trips, to reduce the impact of trips and to enhance supply chain efficiencies (e.g. integrating distribution networks, ITS applications, building institutional partnerships, and developing goods-supportive road, transportation, urban development and land use policies).
- 4. Develop alternative goods movement policy scenarios and test their effectiveness in improving goods movement efficiency and reducing GHGs:** This step will be based on the results of steps 1 and 3 and will develop alternative 'bundles' of policy tools to improve freight and goods movement in the Vancouver region. The enhanced truck model (step 3) will be used to compare and evaluate alternative scenarios.
- 5. Develop a recommended policy framework for a comprehensive goods movement strategy for Greater Vancouver:** This step will consolidate the findings of the preceding steps to develop a policy framework for freight and goods movement and reduce GHGs from goods movement sources in the Vancouver region. The policy framework will provide recommended policy directions and actions to improve the effectiveness and efficiency of goods movement in Greater Vancouver.

Process and Timelines

This work will commence immediately and the first phase will be completed in the first half of 2004. The project will be complete by the end of 2004. Staff from the regional office of Transport Canada will assist at project definition and critical review stages because of their particular expertise in this area.

Monitoring and Evaluation

As this project is developmental planning/policy based, there will be no monitoring program associated with it. Evaluation will take place through review by stakeholders and comparison with other transportation authorities.

Cost

The total cost of this project is \$200,000 shared with Transport Canada, the Province of BC and the GVTA.

Expected Impacts

It is expected that this work will enhance regional understanding of goods movement and possible ways to improve efficiency and will provide valuable input for the Long Term Transportation Plan.

Sharing and Replicability

All metropolitan areas share concerns about efficient goods movement. The work undertaken for the *Sustainable Region Showcase* will be shared with other cities.

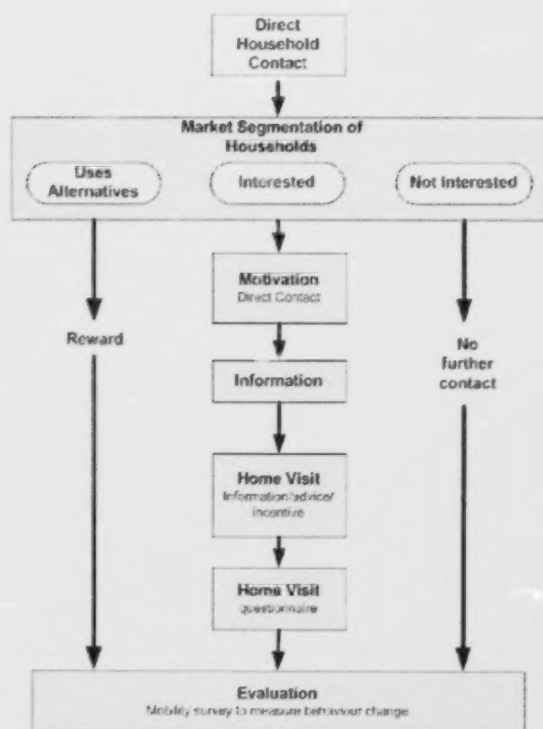
TRAVELSMART



Introduction

According to the most recent Trip Diary Survey conducted by the GVTA in 1999, vehicle ownership in the region is growing at a rate higher than population growth (an increase of 15.6% between 1994 and 1999), people are making more vehicle trips (an increase of 14.6 % between 1994 and 1999) and consequently vehicle kilometres traveled continues to rise. People value the benefits and convenience that private vehicle travel offers given both the perception and reality of the choices available to them. The challenge becomes how can car use be moderated in ways that individuals and communities reap the collective benefits of less car travel. Unlike broad-based travel reduction marketing, TravelSmart targets households through "individualized marketing" to encourage behavioural change. It begins with a good understanding at the household level of varied and complicated travel needs and based on this understanding helps remove barriers to choosing alternative modes for at least some trips.

Greater Vancouver TravelSmart



Context/Background

TravelSmart was first developed in Munich, Germany and has subsequently expanded to Perth, Australia and Portland, Oregon with great success. Unlike conventional trip reduction programs that offer a low-level "flood" of information to a diverse travel market, the TravelSmart program has been able to achieve significant mode shifts by:

- identifying households that are interested in using alternatives to the single occupant vehicle, with a focus on walking, cycling and transit;
- providing targeted, individualized support and resources only to those households interested in shifting modes;
- rewarding those already regularly using alternative means of transportation; and
- targeting these marketing efforts in a particular neighbourhood.

One of TravelSmart's key objectives was to test the effectiveness of an individualized marketing program where no changes were made to transport services and infrastructure, land use planning or transport policies. While the latter are important, these generally take time. The program's aim was to deliver immediate changes to mode choice at a low cost while longer term measures were undertaken. To date, the results have been very impressive.

After implementation of the TravelSmart program in 15,000 households in South Perth in 1997, transit, cycling and walking increased by 21%, 91% and 16%, respectively. Meanwhile, car vehicle kilometres traveled have declined 14%. Moreover, these results were sustained two years later. Cost/benefit analysis conducted in Perth also demonstrated significant program returns by avoiding road capacity increases and maximizing use of the transit system. Although not measured, researchers also found that some participants have experienced health and fitness gains as a result of their walking and cycling more. Work has begun on an expansion of Perth's TravelSmart program with the aim of reaching a large proportion of Metropolitan Perth's population.

The TravelSmart program was recently brought to the United States where the City of Portland is nearing the end of the first phase of its pilot project. To our knowledge, no Canadian community has yet piloted this program.

TravelSmart Development Process

The TravelSmart program was proposed by GVTA and GVRD staff familiar with the program's successes in Australia and Europe. The project was further developed through existing GVTA/GVRD regional committee channels and through planning meetings with partner municipalities who helped craft project principles and objectives and identify appropriate pilot communities. In March 2003, a seminar with the City of Portland's TravelSmart project team helped the GVRD/GVTA and host municipalities further refine and develop this project module. Members of the voluntary sector working on transportation alternatives programs were also invited to this seminar.

The project will be coordinated by the GVTA and the GVRD. Outreach efforts will be also complemented by information technology innovations currently being developed in the GVRD's Tri-Cities area as part of the federal government's "Smart Communities Initiative."



Residents may become interested in transit, carpools and vanpools based on information they receive through TravelSmart.

TravelSmart Concept

In the Vancouver region, the TravelSmart project will be piloted concurrently in six neighbourhoods located in the inner, middle and outer rings of the metropolitan Vancouver region. With varying degrees of access to transit and other travel options, travel behaviour differs significantly in these areas and will help determine what combination of conditions and incentives are necessary to reduce vehicle travel in different areas. To our knowledge, TravelSmart has not yet been piloted simultaneously in several different neighbourhoods. Each of the communities is briefly described below. See the regional map on page 4-5 to see the location of these neighbourhoods.

Inner Ring

The City of Vancouver proposes a neighbourhood called Kitsilano for the inner ring metropolitan area. With 40,000

residents in Kitsilano — the majority between 20 to 39 years old — the neighbourhood is in close proximity to downtown Vancouver and represents an opportunity to measure the effectiveness of TravelSmart in a relatively dense urban neighbourhood with a well-developed walking, cycling and transit infrastructure. Currently, 41% of neighbourhood commuters take transit, walk or cycle. Kitsilano has more commuter cyclists than anywhere else in the region (7%).

The neighbourhood includes a recently redeveloped 24-acre brownfields residential site. Over 1,500 of a planned 2,000 units have been built and, when complete, the neighbourhood will house about 3,000 residents. The development is in close proximity to major transit routes and would be a good test market for TravelSmart, as it may help residents take advantage of transportation options that may not have been available where they previously resided.

Middle Ring

Two neighbourhoods are proposed for the middle ring: Richmond City Centre which is the urban core of a suburban municipality, and the Sperling neighbourhood, a low density residential neighbourhood surrounding a new SkyTrain station in Burnaby.

Located to the south of Vancouver, Richmond City Centre is home to 32,700 residents. Currently, only 12.5% of Richmond City Centre residents commute by transit (lower than the regional average of 14.3%), 7.5% walk to work and 2.2% cycle. Given the high residential densities and proximity to jobs in both Richmond and the City of Vancouver, non-car mode splits have the potential to be much higher. Implementing the program here presents an opportunity to promote trip reduction strategies in a relatively dense suburban area where walking, cycling and transit services and infrastructure have significantly improved over the past few years.

The City of Burnaby will pilot TravelSmart in a suburban single family neighbourhood centred around a new SkyTrain station that was opened in 2002. Prior to the opening of the Sperling SkyTrain station and the restructuring of bus routes in North Burnaby to support the station, the Sperling neighbourhood had relatively poor access to transit. In addition to the new SkyTrain line and bus routes, new opportunities for cyclists and pedestrians are available through a new marked bike lane on the Lougheed Highway and the proposed development of the CVG. Sperling was selected to test approaches for helping traditionally car-dependent residents try alternative modes for at least some of their trips.

Outer Ring

The Cities of Surrey, Delta, and Coquitlam have selected three communities to implement the TravelSmart pilot.



TravelSmart provides a variety of travel alternatives to people who may be tired of the congestion of single occupancy vehicle commuting.

The City of Surrey selected the South Surrey area for its pilot. The area was selected for its fairly good and potentially flexible transit services, including a relatively new community shuttle bus service. The area also represents the lowest density pilot site. It is also a higher income area with high car ownership levels and an older population who may benefit more from the direct contact and personal assistance offered by the TravelSmart program.

The City of Coquitlam selected Coquitlam Centre to pilot TravelSmart. This regional town centre has been the site of significant housing, retail and community facility development over the last 10 years and is now home to 23,000 people. The area is served by the West Coast Express – a commuter train offering service to downtown Vancouver – and an express bus service that connects to the SkyTrain system. A community shuttle bus will also soon be introduced to connect Coquitlam Centre with a low density neighbourhood to its north. Still, transit use remains fairly low in the area, with less than 9% taking transit to work, 6% walking, and 1.4% cycling.

The Tri-Cities area, of which Coquitlam is a member, was the recipient of an Industry Canada Smart Communities Initiative grant. This program has given Coquitlam the



Given direct information about the workings of the transit system, taking the bus may become much more appealing to people who did not do so before their involvement with TravelSmart.

opportunity to develop an "electronic community" and community web portal. Piloting TravelSmart in Coquitlam will therefore have the added benefit of exploring the use of internet technology to promote transportation choices. The network will also be used to provide travel choice information to the community (e.g., when a family books soccer registration or swimming lessons over the internet they will also be able to find out how to reach their destination by bus, walking or cycling) and post project updates. This pilot will therefore help build on Industry Canada's investment in Smart Communities Initiatives.

The Corporation of Delta, located south of Richmond, is proposing the Tsawwassen area as their pilot site. Delta's interest is in increasing transit use but they are also particularly interested in increasing walking and cycling trips in this medium-density suburban area.

Within each of the six pilot neighbourhoods, five hundred (500) randomly selected households will be contacted to complete a simple survey. The survey will result in their being segmented into three groups:

TravelSmart Pilot Neighbourhood Overview

Inner Ring	Neighbourhood Features
Kitsilano, Vancouver	Dense urban neighbourhood, good modal split, excellent transportation infrastructure
Middle Ring	Neighbourhood Features
Richmond City Centre	Urban core of suburban city, good transit access and transportation opportunities
Sperling, Burnaby	Auto oriented, suburban single family neighbourhood with new transit opportunities
Outer Ring	Neighbourhood Features
South Surrey, Surrey	Higher income area with high car ownership levels and fairly flexible and good transit services
Coquitlam Centre	Growing regional town centre with good transit connections, but poor modal split
Tsawwassen, Delta	Medium density suburban area with walking and cycling potential

- Those households that indicate that they are not interested in participating in the program will be left alone and no additional resources will be expended on this group.
- Those that indicate that they are already utilizing a preferred mode (walking, cycling, transit, rideshare or telework) for a significant number of their trips will be provided a reward to encourage maintenance of their behaviour.
- The group indicating an interest in trying an alternative mode will be provided detailed information on their mode of choice, and if desired, visited by program staff with further information in their home. Transit passes/tickets will be provided as an additional incentive to trial.

Household and individual travel surveys will be conducted both before and after the Individualized Marketing campaign, among target and control groups, so that the analysis can quantify the changes in modal choice that are due to the marketing activities alone. The TravelSmart program will also provide an opportunity to compare the relative efficacy and costs of household-based trip reduction programs in comparison to the more traditional employer-based trip reduction program currently operating in the region.

Process and Timelines

The marketing department at the GVTA will oversee the project and a special project team will be hired for the duration of the pilot. Further details provided in Section 6 outline a draft program framework of major project milestones with timelines.

Monitoring and Evaluation

Monitoring and evaluation is a critical component of the TravelSmart showcase program, particularly given the

intention of expanding the program following a successful pilot process. As such, the program will monitor the following quantitative and qualitative indicators:

- Modal shifts – share of trips, trip purpose, trip timing, trip length, trip frequency, trip destination
- Changes in vehicle access and ownership
- Projected community impact – environmental, social, economic
- Participation rates, customer satisfaction, cost/benefit analysis
- Other – transit users public approval rating, impact of proposed and/or implemented transportation measures, respondent/household characteristics
- Comparative differences in impacts between areas (i.e. assessing effectiveness of the program in different land use, transport choice contexts)

Principal data sources will include trip diary information collected through the program surveys (at the beginning and end of the program), TransLink, the GVRD and municipal partners.

As part of the monitoring program, a model developed by Canada Mortgage and Housing Corporation (*Research Report: Greenhouse Gas Emissions from Urban Travel: Tools for Evaluating Neighbourhood Sustainability*, CMHC, 2000) will be used. This model measures greenhouse gas emissions from personal urban transportation according to variations in neighbourhood characteristics, such as density, land use and location factors.

Cost

The TravelSmart program will cost approximately \$900,000 over two years to be funded by Transport Canada (1/3) and the GVTA (2/3). The program will not require direct municipal funding. However, municipalities will be given the option of boosting local sample sizes by providing local funding.



Once provided with information such as the locations of bike routes and facilities, people may become more interested in cycling as a means of travel.

Expected Impacts

The TravelSmart program has the following expected impacts:

- A reduction in GHG emissions
- A decrease in vehicle kilometres travelled
- An increase transit, walking, cycling in designated communities
- A reduction in the costs of providing infrastructure and transportation services.

Sharing and Replicability

One of the key objectives is to provide host municipalities and the regional authorities with valuable information on how to reduce obstacles that stand in the way of increased use of transit, walking, and cycling. With the broad range of communities selected to pilot the project, results will be able to be shared and the program implemented in a diverse range of neighbourhoods throughout the GVRD and other Canadian jurisdictions.

Results of the project will be shared among municipalities in the region through project updates and reports which will be disseminated through existing regional channels, including the GVRD's Regional Administrative Advisory Committee (City Managers from member municipalities), Technical Advisory Committee (Planning Directors from member municipalities) and the GVTA's Major Roads Technical Advisory Committee (Engineers from member municipalities). Information reports will also be sent to member municipalities and will be made available on the TransLink website. A regional workshop will also be organized with municipal partners to demonstrate project outcomes.

Project results and information will also be posted by the City of Coquitlam on their Smart Communities web-site – a community web portal created through Industry Canada's Smart Communities Initiative.

IMPACT ASSESSEMENT AND REPORTING



The Sustainable Region Showcase is designed to demonstrate high leverage projects capable of achieving GHG emissions, while meeting multiple objectives and related co-benefits. It is also designed to have results that increase over time and are sustainable.

The comprehensive nature of the Sustainable Region Showcase presents some monitoring and assessment challenges:

- Only two of the modules (Hybrid Bus and TravelSmart) will be fully 'mature' by the conclusion of the Showcase period in 2006 and allow for full assessment of the impacts.
- Main Street Transit Priority will see significant improvement and transit and pedestrian levels of service and, aided by marketing efforts, substantial immediate ridership and GHG benefits. However, the full impact will take another 1-2 years to realize as corridor travel patterns adjust.
- For the Central Valley Greenway, its full potential is expected to be realized over a 2-6 year timeframe as land use changes, the bicycle network is completed and awareness grows.
- For transit villages, results will vary. Broadway/Commercial will see more immediate results due to the significant access, circulation and public realm improvements and already high density land uses. At the other end of the spectrum, Surrey Central's benefits will be modest initially, but will grow significantly over the 5-15 year horizon as land use change begins to occur.
- For the Goods Movement module, the aim is to understand the nature of the GHG challenge in that sector, with a key outcome being recommendations for action. Results will be measured after implementation.

Many of the changes in mode shift are difficult to measure (e.g. pedestrian and bicycle use) and because many of the projects are integrated components of a dynamic transportation system, it is a challenge attributing mode shift to one project. For example, high bus boardings on Main Street post-Showcase may be attributable to a number of other factors including improved frequency on feeder routes.

The Showcase impact assessment and reporting regime reflects these challenges. The program establishes both regional and project-specific baseline data, measures the projects immediate impacts upon completion (2006) and provides for ongoing monitoring and evaluation as projects mature and expand. The monitoring program also uses a combination of traditional system performance indicators, in conjunction with complementary survey data and qualitative information from users, businesses and the public. The lessons learned in overcoming these monitoring challenges will be valuable for other jurisdictions and for Transport Canada is assisting with measuring Kyoto Protocol progress in the transportation sector.

Time Horizons for Estimating and Monitoring

There are three broad time frames for estimating and monitoring impacts of the Showcase.

- 1. Short Term:** Benefits realized by the end of the Showcase period in 2006.
- 2. Long Term:** Benefits realized by 2013.
- 3. Widespread Implementation:** Benefits realized by 2013 if similar projects are replicated region-wide in the GVRD.

Showcase monitoring is primarily geared towards measuring GHGs and common air contaminants (CACs). This requires collecting and monitoring a range of performance data that also allow for the concurrent measurement of co-benefits (congestion reduction, travel time or cost savings, etc.). Other data will be collected to measure other co-benefits (health and fitness, business health, property values, etc.).

Estimating GHG Impacts for the Showcase

GVTA and GVRD staff prepared a preliminary estimate of expected GHG emission reductions for the Showcase. These are identified in each of the respective module sections in the proposal and are also summarized here.

Estimation of Showcase impacts for this proposal focused on GHG benefits. Different methodologies were used for estimating the GHG impacts:

1. Main Street

- Travel time and service elasticity factors were used to estimate new ridership generated as a result of the improvements (as used for transit service planning projections by GVTA).
- Widespread implementation assumes a similar program to be adopted on six other high volume routes regionally.

2. Hybrid Bus

- Assumes diesel consumption reduced by similar amounts (40-50%) experienced with testing elsewhere.
- Short term and long term assume two buses operating in regular revenue service.
- Widespread implementation assumes 50-100% of expansion and replacement buses to 2013 are hybrid buses instead of diesel.

3. Central Valley Greenway

- Based on consideration of several factors including experience with increased cycling usage on other upgraded, travel time savings and bicycle mode share increase from 1.5% to 2.0%-4.0% of trips in 1.5km catchment.
- Long term assumes growth of bicycle usage at rate of population growth in corridor
- Widespread implementation assumes implementation of 6 greenway corridors to similar standard

4. Transit Villages

- Long term estimated based on accelerated development at Surrey Central

5. Goods Movement

- Will be estimated during the Showcase. Recommended actions will include GHG reduction estimates for potential short and long term actions.

6. TravelSmart

- Widespread implementation assumes ongoing program targeting 10% of households in the region.

Annual GHG Impact of Showcase (Tonnes of GHG)

	Short Term (2006)	Long Term (2013)	Widespread (2013)
Main Corridor Priority	2,000-2,500	2,500-3,000	20,000 - 50,000
Hybrid Bus	120-180	120-180	20,000 - 55,000
Central Valley Greenway	1,200-1,500	6,000-7,000	30,000 - 100,000
Transit Villages	4,000-6,000	90,000 - 120,000	300,000 - 600,000
Goods Movement	TBD	TBD	TBD
TravelSmart	1,000-2,000	2,000-3,000	60,000-90,000

Estimating Co-Benefits

The Main Street Transit and Pedestrian Priority module was one module where sufficient information is available to estimate some co-benefits. For example, improved travel

time and reliability on Main Street due the Showcase measures will result in operating and capital cost savings to the GVTA (which will be redeployed as increased service on Main). Better travel time and new service attracts more riders. It is estimated that the project will have a positive financial impact of up to \$300,000 annually in operating cost, \$100,000-200,000 in annual in capital cost savings (debt service for vehicles saved) and incremental revenue due to new riders.

Monitoring the Showcase

Regional and Municipal Monitoring and Reporting Capacity

The cooperative regional governance structure for the Greater Vancouver region means the Sustainable Region Showcase has a substantial and well-coordinated monitoring capacity.

The GVTA's inter-municipal standing committee (the Major Roads Technical Advisory Committee - MRTAC) and its subcommittees (including cycling, transit, road maintenance and planning) are represented by senior engineers and planners serve as a forums for cooperation and communication between municipalities the GVTA and GVRD on transportation planning issues. All municipal partners in the Showcase are represented on MRTAC and established protocols and working relationships exist.

The GVTA has extensive in-house monitoring capability. GVTA's Strategic Planning Department will develop and implement the Showcase monitoring program, providing additional research, policy and planning expertise. Its Transportation, Research and Information Management (TRIM) group has extensive experience in transportation system monitoring, data management, transportation modeling, geographic information systems and reporting. It conducts a "regional travel survey", a comprehensive

household survey documenting travel behavior in the GVRD on a periodic basis. Surveys conducted in 1992, 1994 and 1999 provide trend information for the regional transportation system.

The GVTA also has manual and electronic data collection systems to monitor transit system performance. Manual ride and screenline checks are done on a period basis and will be focused, particularly with

the Main Street and Transit Villages modules, on supporting showcase monitoring. Recently introduced and forthcoming technology will also assist. Newly installed automatic fare boxes allow the GVTA to monitor boarding

activity, transfer rates and total revenue by route and time. The new trolley fleet expected to be delivered from 2005-2007 will come equipped with automatic passenger counting and vehicle location technologies.

The GVTA's Marketing Department conducts regular usage, attitude and preference surveys. These provide a historical benchmark for measuring Showcase progress and opportunities for ongoing monitoring post-2006.

The GVRD has one of the most sophisticated and extensive air quality monitoring programs in the country. It has an extensively disaggregated inventory of GHGs by source, as well as CACs, providing support for both project-specific and region-wide emissions monitoring. To date, major emission inventories have been completed every five years from 1985 to 2000 (interim inventory updates were also carried out for 1997, 1998, and 1999).

Municipalities will also contribute monitoring resources and expertise to the Showcase. This includes providing information regarding land use, land values, development permitting, parking and traffic volumes (including bicycles).

Monitoring and evaluation is a core component of each partners' business and all have established regular reporting requirements and practices. The Showcase Project Management Team will provide progress reports to all partners on a regular cycle, in addition to a final report in 2006. The Project Team will also produce a newsletter and maintain a website to share information with the public and other Showcase cities.

Monitoring Outcomes

There is a wide range of quantitative and qualitative performance data that will be collected to measure progress on GHG reductions, as well as a range of co-benefits. These all relate to measuring progress towards goals and objectives identified for each Showcase module.

Highlighted here are key performance data to be collected for showcase monitoring. These generally represent data and data sources rather than specific performance indicators. These data will be standardized to provide key indicators (e.g. passenger kilometres/seat kilometre, operating cost per service hour, life cycle cost per tonne GHG reduced, etc.). Survey data will provide a range of additional qualitative and quantitative information for evaluating GHG reductions and co-benefits, including the extent of public involvement and partnerships.

The performance indicators alone will not provide sufficient data to measure GHG reduction. In order to measure GHG reduction, transit, pedestrian and bicycle usage data

will need to be corroborated with household or user intercept survey data that indicate previous mode, previous vehicle type, frequency of trip, trip purpose etc. Using transit, pedestrian or bicycle counts alone may tend to overstate benefits (e.g. higher transit usage may be shifted from walk or bike).

Establishment of Regional and Showcase Baseline

The establishment of a regional impact assessment baseline is will provide information for benchmarking Showcase progress, particularly for the longer term and widespread implementation horizons, where Showcase and expanded GHG initiatives begin to show benefits that are regional in scale.

The GVTA's TRIM group will be conducting its next regional Trip Diary Survey in 2004. The Showcase will augment survey sample sizes in certain Showcase implementation areas to obtain better travel information, particularly for non-motorized modes where local disaggregations are often not reliable due to small sample sizes.

The GVRD's Air Quality division will also be undertaking a major updating of its regional emissions inventory in 2004/2005. This will complement the travel data collected by the GVTA.

Establishment of Project Baseline

Performance data identified will be collected for each module pre- and post-implementation. System performance baseline data will also be supplemented by household and business survey data. Monitoring for Main Street, the Central Valley Greenway and Hybrid Bus will rely more greatly on observed system data, but will be complemented by household survey data (mode choice, attitudes and preferences).

Transit Villages and TravelSmart will rely primarily on household survey data, complemented by observed system performance data. This is because changes related to these projects are more diffuse and difficult to isolate in the transportation network through observed data alone.

For example, for Transit Villages, a benchmark study of 250 households in each of the three SkyTrain station catchment areas will capture resident's attitudes and travel behaviour prior to planning and implementation of each Village concept. Permission will be requested to recontact the household after the implementation of short- and medium-term measures. An additional sample of local residents, plus the benchmark sample still residing in area, will be called post-implementation to measure shifts in attitudes and travel behaviour.

Key Showcase Performance Data

Transit

	Main Street Transit Priority	Hybrid Bus	Central Valley Greenway	Transit Villages	Goods Movement	TravelSmart
Boardings, Boarding profile, Max loads	✓	✓		✓		
Transfer rates	✓			✓		
Max loads, passups	✓					
Service frequency	✓			✓		
Farebox revenue	✓			✓		
Revenue & seat kilometres & hours	✓	✓				
Detailed travel time survey	✓					
On time performance	✓					
Diesel consumption		✓				
Passengers w/ weather protection	✓			✓		

Automobiles

Traffic speed	✓			✓	✓	
Traffic volumes/screenlines	✓		✓	✓	✓	
Parking rates/turnover	✓			✓	✓	
Parking supply				✓		

Cycling

Travel time/intersection wait delay			✓			
Bicycle volumes	✓		✓	✓		
Bus rack/station locker utilization	✓		✓	✓		
Curb rack supply	✓		✓	✓		
Recreational Usage			✓			

Pedestrians

Crossing time/intersection wait delay	✓		✓	✓		
"High street" volumes	✓			✓		
Streetspace reallocated	✓		✓	✓		

Goods

Fleet composition & mode share					✓	
Commodity flows					✓	

Key Showcase Performance Data

Cost/Economic

	Main Street Transit Priority	Hybrid Bus	Central Valley Greenway	Transit Villages	Goods Movement	TravelSmart
Cost: capital, operating	✓	✓	✓	✓	✓	✓
User Travel Time	✓		✓	✓	✓	✓
Composite cost-effectiveness indicators	✓	✓	✓	✓	✓	✓
Property values/lease rates	✓		✓	✓		
Retail sales	✓			✓		

Land Use/design

Sq. ft. residential, commercial, retail	✓		✓	✓		
Permit applications	✓		✓	✓		
Developer response	✓		✓	✓		

Survey Based Data

Specific Data

Mode choice	✓	✓	✓	✓		✓
Trip rate, distance, purpose	✓	✓	✓	✓		✓
Vehicle ownership/type	✓			✓		

Other General Public/User Data

From user attitudes & preferences	✓	✓	✓	✓		✓
Public/business attitudes & preferences	✓		✓	✓		
Regional trip diary	✓	✓	✓	✓	✓	✓

Emissions

GHGs and CACs	✓	✓	✓	✓	✓	✓
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Partnerships/Public Involvement

Community association involvement	✓	✓	✓	✓	✓	
Business association involvement	✓	✓	✓	✓	✓	
Open houses/public meetings	✓	✓	✓	✓		
Survey participation rates	✓	✓	✓	✓		✓

Similarly, with TravelSmart, 3,000 households will be contacted to establish current modal behaviour and incidence of households interested in switching to sustainable modes. The remaining households will be re-contacted post-intervention to determine changes in travel behaviour, and again 1-2 years later to measure the durability of changes.

For Goods Movement, mode share, logistics, commodity flow and stakeholder data collected will be collected to establish a baseline for monitoring and estimating the impacts of future actions. They will also be used to improve the freight forecasting capability of the regional transportation model.

Monitoring and Evaluating Project Synergies

There are a number of synergies within and amongst Showcase modules that the monitoring program will be geared to measuring.

The Main Street, Central Valley Greenway and Broadway/Commercial Transit Village modules all physically interact. At Broadway/Commercial Station there will be a particular focus on ensuring a high level of bicycle connectivity from the Greenway to the station. There appears to be significant latent demand for bicycle trips to the station and survey and observed data will measure this. The Greenway also intersects Main Street at Main Street/Science World Station. There are physical improvement synergies possible concurrent with the reconstruction for the Main Street sewer and water works expected in 2004. Such improvements include bicycle and pedestrian crossings at high traffic locations.

User response to qualitative aspects of physical design are often difficult to quantify. Such improvements will be undertaken with both the Main Street Showcase and the three Transit Villages, providing several sources of comparative data. The Main Street Priority program anticipates using conventional marketing techniques to promote the new service and create awareness. This presents an opportunity for future deployment of TravelSmart in the Main Street corridor to determine the incremental impact of an individualized approach to marketing this service.

Cities have a range of transportation and land use characteristics. Solutions in one area, might not work as well in others, or may have to be adapted. The Transit Villages module tests the concept's effectiveness in different transportation and land use contexts.

Similarly, TravelSmart tests the individualized travel marketing concept in a range of contexts. This poses interesting questions: How much benefit can be realized from such a program in high density versus low density areas? Is the benefit lower in high density areas because most people already use alternative modes? Or is the benefit greater because more transportation choice is available? Does the program need to be modified for each context? Such a comparative evaluation of TravelSmart has never been conducted and will ensure future applications are cost-effective.

Finally, the moving people and goods throughout the region has local air quality and livability impacts. The monitoring program will test the extent to which changes in transit vehicle technology and goods movement not only affect air quality, but perceptions of the city, and willingness to live and do business in higher density parts of the region where traffic impacts may be greater.

FINANCIAL PLAN



The Showcase Program offers the potential to craft a significant intergovernmental consensus, with private and non-profit sector involvement, to demonstrate a range of relatively low-cost strategies capable of achieving tangible transportation benefits. Significant financial contributions have been formally committed by two regional agencies, four GVRD member municipalities and several private and non-profit sector partners.

The Showcase proposal prepared by staff in partnership with member municipalities represents a transportation investment package of approximately \$35 million in financial and in-kind contributions. This is approximately \$12.8m, \$16.7m and \$5.5m in 2004, 2005 and 2006, respectively.

The GVTA's cost share will be up to \$12.6 million (36% of project costs). Transport Canada's share will be \$10 million (29%), the municipalities will contribute \$10.4 million

(29%) and private and non-profit sectors will be contributing \$1.7 million (5%). There is a potential for an additional GVRD contribution of \$0.74 million should a Waterfront route be chosen for the New Westminster portion of the Central Valley Greenway

Showcase Contributions Reflect Regional Commitment and Capacity

The commitment of financial and human resources to developing and funding this proposal is a reflection of both the political commitment to realizing sustainable transport plans, and the ability of regional staff and partners to plan and deliver an ambitious program. Securing partner contribution commitments required extensive stakeholder and partner consultation and collaboration. In addition to the \$30,000 in proposal development costs funded by Transport Canada, it is estimated that well over 4,000 regional, municipal and partner staff hours (over \$150,000 in-kind) have been committed to the development of the *Sustainable Region Showcase*.

Basis for Costs

Costing for the various modules of the Showcase was conducted in consultation with municipal and private partners and with various GVTA and GVRD divisions (i.e. Engineering, Service Planning, Capital Projects, Marketing and Parks). Costing varies in level of precision for various projects and is based on experience of similar programs, standard unit costs, previous planning studies and estimates from vendors. Further detailed scope and costing

Partner Cost Sharing

Partner	Contribution	% Share
Transport Canada	\$ 9,998,000	28.6%
GVTA	12,448,000	35.6%
GVRD	270,000	0.8%
BC Ministry of Transportation	200,000	0.6%
City of Vancouver	5,718,000	16.3%
City of Burnaby	3,306,000	9.5%
City of Surrey	1,091,000	3.1%
City of New Westminster	281,000	0.8%
BEST/VanCity	452,000	1.3%
Private	1,210,000	3.5%
TOTAL	\$ 34,974,000	100.0%

Showcase Proposal Budget Summary

	2004	2005	2006	Total
Central Valley Commuter Path	\$4,919,000	\$4,974,000	\$4,447,000	\$14,341,000
Transit Priority	3,050,000	3,009,000	324,000	6,383,000
Hybrid Bus Demonstration	1,625,000	10,000	10,000	1,645,000
Goods Research	100,000	100,000	0	200,000
Station Precinct Improvement	2,135,000	7,650,000	550,000	10,335,000
TravelSmart	486,000	420,000	0	906,000
Project Management	486,000	493,000	185,000	1,163,000
SHOWCASE TOTAL	\$12,800,000	\$16,656,000	\$5,516,000	\$34,972,000

needs to be completed on certain project components, however sufficient contingency has been incorporated in the project budgets to account for cost variances and basic scope changes.

Three modules may see some variation in project scope as the planning process proceeds. The Station Precinct Module's capital budget is order-of-magnitude and represents a "budget envelope" for improvements based on an initial assessment of needs and a range of candidate improvements. Actual decisions on specific investments have not yet been made so as not to pre-empt the planning process. Similarly, the Main Street Priority module has approximately 10% of its project budget dedicated to "spot improvements", a range of which have already been identified. However, others may be identified in the planning process, and these will be prioritized and selected at a later date. With the CVG, there may be some adjustments to alignment that may impact costs.

Cost Share Allocation

Generally, costs were allocated on an approximate 1/3 cost-share formula (federal, region, municipality). Cost allocation was designed to accommodate the constraints of cost-share formulae, established funding criteria and restrictions from various funding partners. In cases where only GVTA and the Transport Canada are funding partners, GVTA's share of costs is generally 2/3.

The Showcase Budget table provides a more detailed summary of costs by project, year, partner and type (i.e. capital/program, cash/in-kind). Of the GVTA's \$12.6m share, approximately \$0.9m will be "in-kind" contributions (e.g. office space, supplies, marketing support), for a net cash contribution of \$11.7m. The GVTA will cover a majority of costs (in most cases 2/3) for the Hybrid Bus, Goods Movement, TravelSmart modules and project management.

GVRD contributions are \$0.26m in financial contributions in support of various planning process components of the project, however this may increase to \$1.1m if further capital is dedicated as a result of a waterfront CVG route being selected. The remaining municipal contributions are generally allocated on a 1/3 basis for projects contained within their jurisdictions.

The BC Ministry of Transportation is contributing \$0.2m for program costs for Showcase modules falling within their mandate.

BEST is making contributions of \$0.45m to the CVG during the 2004-2006 Showcase implementation period. However, it is estimated that a further \$2-3m in contribu-

tions to the CVG (in expansion, upgrading and maintenance) will be made post-2006 as a result of their community and corporate fundraising efforts.

Sources of Funds

The GVTA Board has approved the GVTA share of Showcase funding to be allocated from existing budgets. There are a number of general program and funds that have not yet been committed to specific projects, or from which funding can be drawn without displacing other projects. These include:

- Transit Road Related Improvement Program (TRRIP)
- Intelligent Transportation Systems (ITS) Capital
- Major Road Network (MRN) Minor Capital where improvements are on the MRN
- Bicycle Capital and Program Funds
- Transportation Demand Management
- Marketing Initiatives
- In-kind contributions (e.g. supplies, office space, staff time)

The source of municipal funds committed to the project is generally either from unallocated capital and program budget envelopes for 2004-2006 or incremental budget increases. Municipal financial commitments illustrates the importance of GHG reductions at the local level and the realignment of municipal priorities. As a graphic example of how this realignment supports Showcase GHG objectives, municipalities will in some cases draw their cost share, and a matching GVTA share, from the region's Major Road Network (MRN) Capital fund for any projects that are on the MRN (i.e. Transit Villages, CVG, Main Street Priority). In other words, capital spending on the MRN will prioritize spending on "green modes" (transit, walking, cycling) as opposed to traditional spending focused on auto mobility.

The City of Vancouver, has drawn \$2m of its \$4.6m contribution from a \$20m fund for "senior government cost share projects" approved by voters in a 2003 plebiscite. The City of Vancouver approval of *Sustainable Region Showcase* funding was the first use of funding from this source in the City's 2004-2006 Capital Plan.

Federal Funds Lever Significant Local Investment

As an indicator of regional commitment to the success of the project, it is important to note that a \$10m federal contribution (29% of Showcase) levers \$25 m in local contributions (71%), over \$5m more than would otherwise be needed under a strict 2/3 cost share formula. This incre-

mental contribution levered from local partners represents additional expenditures deemed necessary to complete the projects to a sufficiently high standard to ensure clear results are achieved.

Furthermore, the vast majority of local contributions are financial. Approximately 7% of the project budget is "in-kind" contributions. Of this, \$1.3m is in staff time, office space, supplies, and administrative support and \$1.2m is for capital facilities on Main Street. What this means is that the \$10m federal contribution levers over \$22.5m in direct local financial contributions and \$2.5m in in-kind contributions.

Sustainable Region Showcase Proposal: Detailed

(in thousands of dollars)

	FEDERAL Transport Canada	PROVIN Minist Transpor
SHOWCASE PROJECT TOTAL		
Central Valley Greenway	\$4,396	
Main Street	1,656	
Hybrid Bus	536	
Goods Movement	66	
Transit Villages	2,732	
TravelSmart	299	
Project Mgt.	314	
SHOWCASE TOTAL	\$9,998	
CAPITAL CASH		
Central Valley Greenway	\$4,221	
Main Street	1,544	
Hybrid Bus	536	
Transit Villages	2,527	
CAPITAL CASH TOTAL	\$8,827	
CAPITAL IN-KIND		
Main Street		
CAPITAL IN-KIND TOTAL		
PROGRAM CASH		
Central Valley Greenway	\$175	
Main Street	112	
Goods Movement	66	
Transit Villages	205	
TravelSmart	299	
Project Mgt	314	
PROGRAM CASH TOTAL	\$1,170	
PROGRAM IN-KIND		
Central Valley Greenway		
Main Street		
Hybrid Bus		
Project Mgt		
PROGRAM IN-KIND TOAL		

et Summary

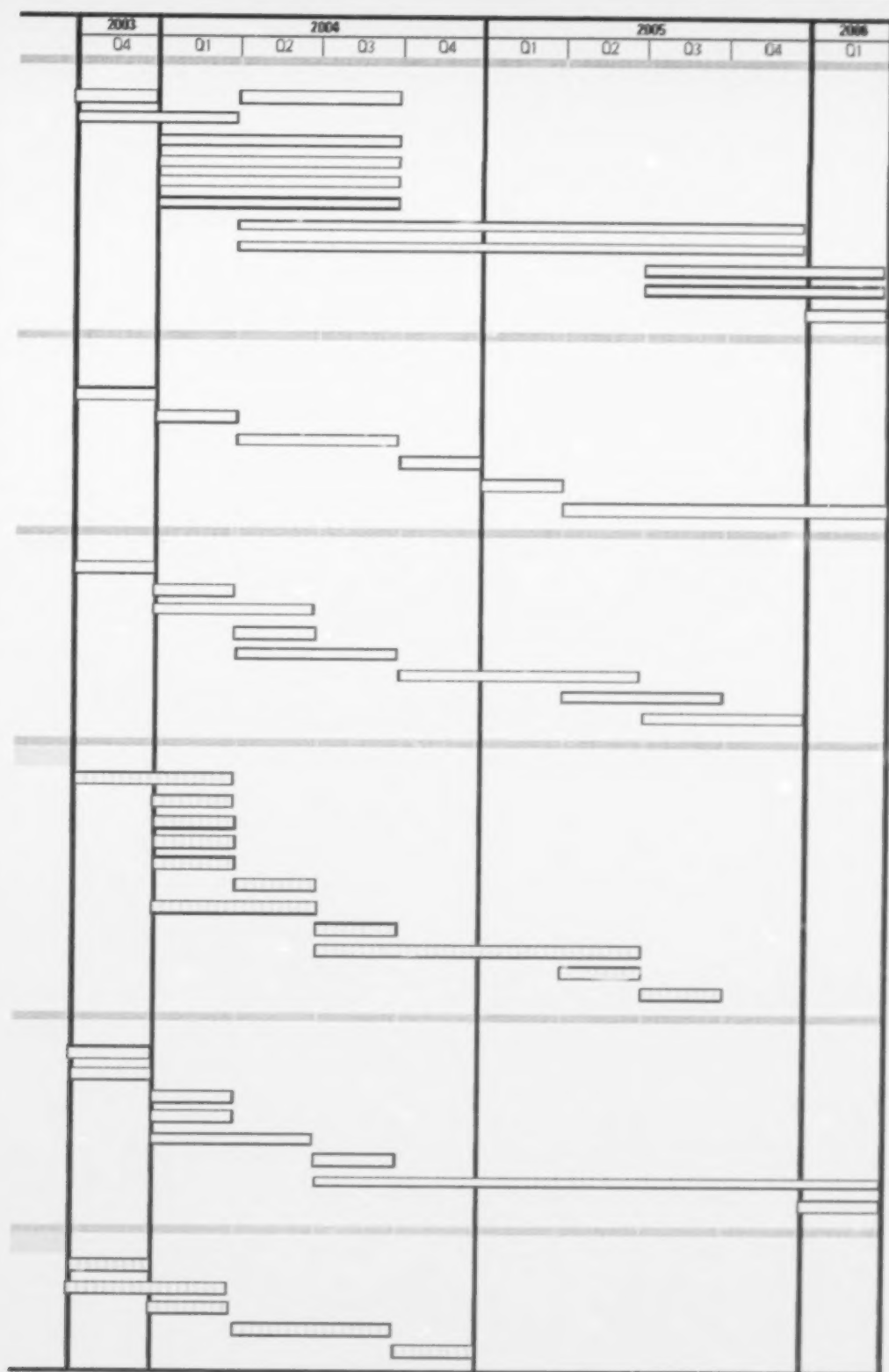
FUNDING SOURCE BY AGENCY

	REGIONAL		MUNICIPAL				OTHER		GRAND TOTAL
	GVTA	GVRO	Vancouver	Burnaby	Surrey	New Westminster	BEST/VanCity	Private	
	\$4,445	\$60	\$2,343	\$2,365		\$281	\$452		\$14,341
	2,356		2,372						6,383
	1,108								1,645
	134								200
	3,148	210	1,004	941	1,091			1,210	10,336
	607								906
	849								1,163
	\$12,648	\$270	\$5,718	\$3,306	\$1,091	\$281	\$452	\$1,210	\$34,974
	\$4,221	\$60	\$2,000	\$1,991		\$230	\$225		\$12,947
	1,544		1,143						4,231
	1,088								1,625
	3,135		938	900	1,000			1,160	9,660
	\$9,988	\$60	\$4,081	\$2,890	\$1,000	\$230	\$225	\$1,160	\$28,462
			\$1,155						\$1,155
			\$1,155						\$1,155
	\$224		\$123	\$124	\$51	\$298	\$74		\$772
	112		73						297
	134								200
	14	210	66	41	91			50	677
	607								906
	437								951
	\$1,528	\$210	\$262	\$166	\$91	\$51	\$74	\$50	\$3,802
			\$220	\$250			\$153		\$623
	700								700
	20								20
	213								213
	\$933		\$220	\$250			\$153		\$1,556

SECTION 6

SHOWCASE IMPLEMENTATION SCHEDULE

A	Central Valley Greenway
A1	Base data collection
A2	Consultation: issues and ideas
A3	Committee reviews
A4	Consultation: options/alternatives
A5	Council/Board approvals
A6	Detailed design development
A7	Construction
A8	Community programs
A9	Marketing and promotion
A10	Monitoring and evaluation
A11	Reports: Best Practices/Guidelines
B	Transit Villages
	<i>* timelines vary significantly depending on municipal planning needs for each station</i>
B1	Project scoping
B2	Base data collection
B3	Draft plan preparation
B4	Draft plan review/consultation
B5	Plan Finalization
B6	Implementation
C	Main Street
C1	Review and update travel data
C2	Public consultation process
C3	Draft feasible measures and impacts
C4	Public consultation and Council/Board approval process
C5	Implement and evaluate operational improvements
C6	Implement and evaluate street redesign improvements
C7	Implement and evaluate customer service and marketing improvements
C8	Final report on all impacts
D	TravelSmart
D1	Hire consultant (for detailed project plan, timelines and budget) and program staff
D2	Consultation with municipal/community partners
D3	Develop detailed program plan, produce materials
D4	Launch community awareness activities
D5	Conduct baseline research
D6	Initiate Individualized Marketing efforts
D7	First evaluation
D8	Prepare interim report
D9	Second evaluation
D10	Conduct analysis and evaluation
D11	Prepare final report
E	Hybrid Bus
E1	Specification requirements review with vendor
E2	Vehicle retrofits order
E3	Vehicle delivery
E4	Training requirements completion
E5	Revenue service monitoring program
E6	Final monitoring program report
E7	Partner agency demonstrations
E8	Final report and recommendations
F	Goods Movement
F1	Survey and interview research
F2	Improve/refine 1999 truck transport model
F3	Inventory goods movement best practices
F4	Develop policy scenarios and test GHG reductions effectiveness
F5	Recommended policy framework for comprehensive strategy



SHOWCASE STAFFING



Given the size and scope of the *Sustainable Region Showcase*, dozens of staff at the regional and local levels will be involved in the Showcase's planning and implementation. Rather than enumerating the full staff complement, this section will detail the regional Project Management staffing and more generally describe municipal implementation staffing.

The Project Management Team will be responsible for coordinating the overall regional showcase. In terms of Showcase implementation, the GVTA will carry primary responsibility for the TravelSmart, Hybrid Bus, Goods Movement and aspects of the Main Street Transit Priority Projects. The municipalities will carry primary responsibility for Central Valley Greenway, Transit Villages, and Main Street Priority, with GVTA and/or GVRD providing technical or planning support. GVRD will carry primary responsibility for CVG sections that fall under GVRD Parks mandate.

In addition to the staff complement highlighted below, a number of contractors and consultants will be retained to provide technical expertise where required.

Project Management Team

The Project Management Team will be based out of the GVTA and will largely be responsible for:

- Coordinating the planning, funding, administration and implementation of Showcase components;
- Working with municipalities to develop and support planning processes, establish criteria, outcomes and milestones;
- Providing assistance with the development and implementation of planning processes, community consultation, etc.;
- Conducting technical analysis and research and providing such support to municipalities;
- Manage consultants and contractors;
- Marketing and communications;
- Monitoring and evaluation; and
- Reporting and information dissemination.

Three staff will comprise the Project Management Team:

- Project Manager
- Planner/Engineer
- Planning Analyst

The Showcase Steering Committee will guide the Project Team (see Section 9) and the Project Manager will report to the GVTA's Director of Strategic Planning.

Costs for Project Management are 2/3 GVTA. Sufficient provision has been made in the budget for marketing support, communications and monitoring. All the Project Management staff positions are incremental and will require new hires under a competitive process. The region has a pool of hundreds of planning professionals from which to draw.

TravelSmart will be managed and implemented by the existing GVTA Transportation Demand Management Department, but will require a complement of temporary contract community staff to conduct telephone and household visits.

The Project Management Team will be drawing on significant additional technical and management staff resources with the GVTA and GVRD to support implementation efforts including those from: Capital Projects, Implementation and Strategic Planning, the Transport Research and Information Management, Intelligent Transportation Systems, Marketing, Communications, Transportation Demand Management, and BC Rapid Transit, as well as Parks (GVRD) and Policy and Planning (GVRD).

Municipal Staff Teams

Municipalities will be dedicating significant technical and senior staff resources to the implementation of the Showcases in their respective jurisdictions.

In the **City of Vancouver**, staff from Central Area Planning, Strategic Transportation (Engineering), City Plans, Streets and Greenways will be involved in leading planning processes, physical design and construction for the Central Valley Greenway, Transit Villages and Main Transit Priority.

In the **City of Burnaby** staff from Planning and Building and Engineering will be involved in leading planning processes, physical design and construction for the Central Valley Greenway and Transit Villages. Similarly, staff from Planning and Engineering division will be leading implementation for the CVG in the **City of New Westminster** and Transit Villages in the **City of Surrey**.

Municipal staff will also be assisting and advising the GVTA in TravelSmart planning and evaluation, Hybrid Bus deployment and Goods Movement planning.

Non-Government Partner Staffing

As part of its contribution to the Showcase, BEST will have at least two staff developing and implementing promotion and community programming initiatives for the Greenway. These staff will liaise with the Greenway Working Group and will report to the Executive Director of BEST. It is expected that these programs will be ongoing after 2006 as part of the VanCity Greenway Legacy Endowment.

The UniverCity Community Pass will be implemented by the UniverCity developer with technical assistance from TransLink.

An Experienced Team

The *Sustainable Region Showcase* will draw on new and existing staff in regional government, local government and the non-profit sector, to implement the projects. These include administrative support staff, planners and engineers, urban designers, as well as senior staff and managers with a wealth of experience in project development, management and implementation.

PARTNER ROLES AND RESPONSIBILITIES



There are a number of project partners each of whom have distinct roles in the planning, funding, implementation and marketing of the Showcase.

The **GVTA** will have the primary responsibility for implementation of the Showcase project and has the largest financial commitment. The GVTA is primarily responsible for providing technical assistance, planning coordination and cost-share funding to municipalities (subject to meeting criteria) and for monitoring and evaluation.

The **GVRD** will work closely as a "sister regional agency" to ensure co-ordination with growth management issues, and will plan, design and construct sections of the Greenway (in New Westminster) where its Parks mandate is met.

The **BC Ministry of Transportation** will be working closely with regional staff providing technical and policy input to Showcase modules related to their mandate, particularly Goods Movement.

Several municipalities are involved as project partners: the Cities of Vancouver, Burnaby, Richmond, Surrey, Coquitlam, Delta, and New Westminster. Together these municipalities have a population of 1.5 million and make up 76% of the region's population. The **Cities of Vancouver, Burnaby and New Westminster** will play lead roles in planning, designing, cost-share funding and constructing their respective sections of the CVG and managing related public process.

Better Environmentally Sound Transportation (BEST), a local non-government organization, will also partner on the Central Valley Greenway. BEST will be responsible for developing and managing community involvement programs, coordinating the CVG working group, marketing and promoting the Greenway and providing capital funding to municipalities to provide "value added" infrastructure. BEST's role will be ongoing after the Showcase period.

UniverCity, the Simon Fraser University Housing Trust, will partner on the community pass program.

Several staff from planning and engineering departments of municipal offices will be working on their parts of the Showcase. As the project evolves, it is likely that there will be some private sector partners such as Business



Improvement Associations involved in the station area precincts and Main Street.

The overall project team will have a full time Showcase Project Manager and two additional full time staff and will be located at GVTA headquarters. A separate team will be set up to implement the TravelSmart program, but will be under the overall management of the Showcase project manager. There will be a technical working team made up of all the partner agencies. In addition, there will be a steering/advisory team made up of senior representatives from GVTA, GVRD, the Province of BC, Transport Canada regional office, representatives of standing technical committees, and most likely representation of some non-government organizations and university faculty. There will be periodic progress reports made to the relevant political committees at GVRD and GVTA.

Confirmation of Partner Support

All financial approvals were secured from partner municipal councils through council resolutions. For each municipality, a report was prepared by municipal staff outlining the objectives of the Transport Canada Showcase and the scope of the proposed projects. Appendix A contains all council resolutions. Approval was also obtained from the GVTA Board and GVRD Board. Letters from our non-government partners, BEST and UniverCity Simon Fraser University Housing Trust are also included in Appendix A.

SECTION 9

CONTACT INFORMATION



If you require more information or clarification please contact the following staff:

Stephen Rees
Program Manager, Transportation Policy
TransLink (GVTA)
1600 - 4720 Kingsway
Burnaby, BC
V5H 4N2
Tel: (604) 453-4561
Fax: (604) 453-4628
Email: stephen_rees@translink.bc.ca

Christina DeMarco
Senior Planner
Policy and Planning Department
Greater Vancouver Regional District
4330 Kingsway, Burnaby BC
V5H 4G8
Tel: (604) 436-6850
Fax: (604) 436-6970
Email: cdemarco@gvrd.bc.ca

Tamim Raad
Senior Transportation Planner
TransLink (GVTA)
1600 - 4720 Kingsway
Burnaby, BC
V5H 4N2
Tel: (604) 453-4574
Fax: (604) 453-4628
Email: tamim_raad@translink.bc.ca

APPENDICES

Appendix A

PARTNER RESOLUTIONS AND LETTERS OF SUPPORT

- City of Vancouver
- City of Vancouver Parks Board
- City of Burnaby
- City of New Westminster
- City of Surrey
- City of Coquitlam
- City of Richmond
- Corporation of Delta
- Better Environmentally Sound Transportation (BEST)
- Simon Fraser University Community Trust (UniverCity)

Appendix B

OTHER LETTERS OF SUPPORT

- Vancouver 2010 Bid Corporation
- Vancouver City Savings Credit Union (VanCity)
- Vancouver Area Cycling Coalition
- Evergreen
- Trails BC

Appendix C

MEDIA

- "Non-profit groups vie for \$1 million" (Vancouver Sun, August 8, 2001)
- "Corporations lead by example in acts of sharing" (Vancouver Sun, November 17, 2001)
- "City reveals plans for green transportation" (Burnaby Now, May 26, 2003)
- "GVRD, TransLink pitch 'Showcase' transportation projects for federal funding" (Press release, April 30, 2003)
- "Transit Cash for Coq.?" (Tri-City News, May 3, 2003)
- "Going for the green" (The Record, May 7, 2003)

Appendix D

CENTRAL VALLEY GREENWAY ROUTE SUMMARY

Appendix E

ANNEX D



Vancouver City Council

Agendas, Reports, Minutes

ADMINISTRATIVE REPORT

Date: March 25, 2003
Author/Local: D. S. Scott/7155
RTS No. 03316
CC File No. 5551

Meeting: April 8, 2003

TO: Standing Committee on Transportation and Traffic
FROM: General Manager of Engineering Services in consultation with the Directors of Current Planning and of City Plans
SUBJECT: City Participation in Transport Canada's Urban Transportation Showcase Program Competition

RECOMMENDATIONS

A. THAT Council endorse City participation with TransLink (GVTA), the Greater Vancouver Regional District (GYRD) and other regional municipalities in the Greater Vancouver Grant Application for Transport Canada's Urban Transportation Showcase Program Competition.

B. THAT upon confirmation of Federal funding, staff report back seeking a formal Council allocation of funds to cover the City's share of the Showcase Program project costs.

C. THAT Council approve "in principle" the allocation of

- \$2.63 million from the Streets allocation within the 2003-2005 Capital Plan, and
- \$ 2.0 million from the \$20 million of borrowing authority approved by the voters for the City's share of projects receiving senior government cost sharing, to cover the City's \$4.63 million share of Showcase Program project costs.

CITY MANAGER'S COMMENTS

The City Manager supports the above recommendations.

COUNCIL POLICY

The Senior Government Cost Share Fund was created by Council and approved by Public Plebiscite in 2002.

The City of Vancouver Transportation Plan approved by Council in May 1997.

PURPOSE

The purpose of this report is to obtain Council support for City participation in the Greater Vancouver Grant Application for Transport Canada's Urban Transportation Showcase Program Competition, and for approval in principle for funding the City's share of the Showcase Program



VANCOUVER
BOARD FOR
PARKS AND
RECREATION

May 13, 2003

Urban Transportation Showcase Program
Environmental Affairs, Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa ON K1A 0N5

Re: *Sustainable Region Showcase proposal*

Dear Committee Members,

The Vancouver Park Board is a strong supporter of opportunities to develop sustainable urban design and "green" infrastructure in the City of Vancouver, and by extension, the Greater Vancouver Region. Successful execution of such initiatives often requires inter-governmental cooperation at the regional level and financial support of senior governments. The Vancouver Park Board particularly welcomes targeted and ongoing financial support from the Government of Canada for sustainable infrastructure at the municipal and regional levels across Canada.

In that light, the Vancouver Park Board is very pleased to learn of Transport Canada's Urban Transportation Showcase Program (UTSP), a program which will cost-share municipal projects and regional infrastructure to help reduce Greenhouse Gas emissions, enhance urban design and provide safer and more convenient facilities for pedestrians, cyclists and public transit users.

In the Lower Mainland, a comprehensive proposal has been prepared by two regional government agencies – the Greater Vancouver Regional District (GVRD) and Greater Vancouver Transportation Authority (GVTA or TransLink). The "Sustainable Region Showcase" package represents an innovative, integrated package of sustainable transport and land-use projects in the City of Vancouver and surrounding GVRD municipalities.

The Vancouver Park Board hereby expresses its strong support for the "Sustainable Region Showcase." If successful, the Vancouver region "Showcase" proposal will provide significant co-benefits that align with the Park Board's mandate to expand green space in urban areas and improve access to Park Board facilities.

While the Sustainable Region Showcase is sure to provide broad and positive benefits to the public realm across Vancouver, the Vancouver Park Board has a particular interest in two components of the proposal.

- o *Main Street Transit and Pedestrian Priority:* This comprehensive project is designed to increase transit ridership and enhance the pedestrian realm along the Main Street corridor in Vancouver. There are considerable opportunities to improve pedestrian safety and design access for the new Mission Plaisant community centre location (1 Kingway at Main), a major city facility consisting of a library, daycare and a housing component.
- o *Central Valley Greenway:* This cycling and pedestrian pathway will create a linear 'park-like' space and public realm through existing and developing areas of Vancouver's Downtown, False Creek area and East Vancouver. The Greenway will provide unique opportunities to integrate design and use of transport corridors with green landscaped spaces within the City of Vancouver.

The Vancouver Park Board anticipates and welcomes the opportunity to cooperate and assist in the implementation of the above projects. We strongly encourage the Transport Canada "Showcase" committee to favourably consider the Sustainable Region Showcase proposal being submitted by the GVRD and TransLink.

Thank you for your consideration.

Yours sincerely,

Commissioner Heather Deal
Chair

cc: Mayor Campbell and Members of Council
Judy Rogers, City Manager



City of
Burnaby

Office of the City Manager

Robert H. Moncur
City Manager

April 24, 2003

Transport Canada
Urban Transportation Showcase Program
330 Sparks Street
Ottawa, ON
K1A 0N5

Dear Sir/Madam:

SUBJECT: URBAN TRANSPORTATION SHOWCASE PROGRAM

At its regular meeting of March 11, 2003, Burnaby City Council approved in principle participation in the Urban Transportation Showcase proposal being prepared jointly by the GVTA and GVRD.

Based on the approval from Council, the City of Burnaby will identify funding within the City's Five Year Capital Program to finance the Central Valley Greenway project and to partner with the GVRD and TransLink in the implementation of the SkyTrain Station Precinct Improvement and Travel Smart projects in the two Burnaby sites. This recognizes that Burnaby Council has directed staff to submit a further report on the conclusion of the planning process outlining a detailed program and costs for its consideration and approval.

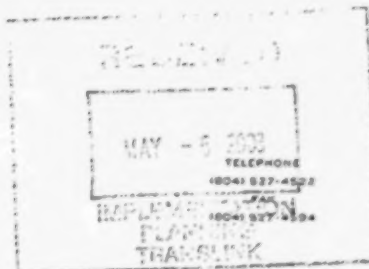
The City believes that the Showcase proposal is a very worthwhile initiative in the effort to reduce greenhouse gas emissions as it will provide both immediate benefits and valuable experience that can be transferred to other municipalities in Canada. The lessons learned in the showcase components scheduled for Burnaby (the Central Valley Greenway, SkyTrain Station Precinct Improvement and the Travel Smart program) will be applicable in many other urban areas in Canada.

Yours very truly,

Robert H. Moncur
City Manager

JBjc/jh

MAYOR'S OFFICE
311 ROYAL AVENUE
NEW WESTMINSTER, B. C.
V3L 1H0



30 April 2003

File: 3215-32

Mr. Doug McCallum, Chair
TransLink
1600 - 4720 Kingsway
Burnaby, BC
V5H 4N2

Mr. Marvin Hunt, Chair
Greater Vancouver Reg. District
4330 Kingsway
Burnaby, BC
V5H 4G8

Dear Sirs:

RE: Transport Canada Urban Transportation Showcase Program

I am pleased to advise you that, on April 7th, 2003, City Council unanimously approved the participation of New Westminster in the Central Valley Greenway component of this program, with a funding commitment of up to \$280,000.

This Greenway will provide an important intermodal facility promoting walking and cycling as an attractive transportation alternative, linking four rapid transit stations with the City's major employment and residential concentrations and providing convenient connections to neighbouring municipalities.

We look forward to working with Burnaby, Vancouver, TransLink and the GVRD to make this a true "showcase" of innovative transportation facilities in Canada.

Sincerely,

Wayne Wright
MAYOR

Copy: Members of City Council
Paul Daminato, City Administrator



CITY OF SURREY
Planning and Development Department

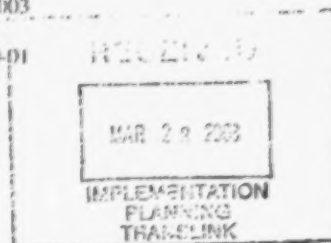
14245 - 56th Avenue, Surrey
British Columbia, Canada V3N 1A2

Telephone:
(604) 591-4441

FAX:
(604) 591-2507

March 26, 2003

File: 0430-01



Ms. Joanna Brownell
TransLink, Implementation Planning
1600-4720 Kingsway
Burnaby, BC
V5H 4N2

Dear Ms. Brownell

Re: Transport Canada Urban Transportation Showcase Program

I am pleased to advise that the Surrey City Council has approved, on March 24, 2003 staff's recommendations to participate in the Urban Transportation Showcase Program and to contribute up to \$2 million over the years 2004 to 2006, representing approximately one-third of the costs for the Surrey projects. I hereby enclose a copy of the Corporate Report No. R050, along with the Council Resolution certified by the City Clerk for your information.

We are looking forward to working together with GVRD/GVTA in the near future in the completion of the project proposals and hopefully we could carry out these worthwhile projects for the Region in the next few years. Should you need further information from us for the preparation of the final submission, please do not hesitate to contact me by e-mail or by phone at 604-591-4490.

Yours truly,

How Yin Leung
Manager
Area Planning and Development

HYL/Transport Showcase letter/Lake

Enclosures

c.c. General Manager, Planning and Development
General Manager, Engineering



Legislative Services Department

Telephone
(800) 398-4132

Fax
(605) 591-8731

MARGARET JONES, ACTING CITY CLERK

CITY OF
C O Q U I T L A M



2003 May 8
Our File: 16-8400-01/000/2003-1
Doc #: 179888

Mr. Johnny Carline
Chief Administrative Officer
GVRD
4330 Kingsway,
Burnaby, B.C. V5H 4G8

Dear Mr. Carline:

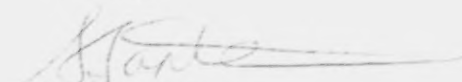
RE: Transport Canada Urban Transportation Showcase

Please be advised that at its Regular Meeting held May 5, 2003, Council was updated on the Transport Canada Urban Transportation Showcase Program submission by the GVRD, the Greater Vancouver Transportation Authority and the cities of Coquitlam, Richmond and Burnaby.

Council would like to extend its best wishes to the GVRD in its effort to obtain funding for this innovative initiative to encourage municipalities to adopt more energy efficient transportation and reduce greenhouse gases.

Should you have any questions or require any further information in regards to this matter please contact the writer at (604) 927-3013.

Yours truly,


Sonia Santarossa
City Clerk



City of RICHMOND

6911 No. 3 Road
Richmond, B.C. V6V 2C1
Telephone: (604) 276-4123
Fax No: (604) 276-4332

MALCOLM BRODIE
MAYOR

April 4, 2003
File: 0140-01

Urban Transportation Showcase Program
Environmental Affairs, Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa, ON K1A 0N5

Dear Selection Committee Members:

Re: GVRD/GVTA Urban Transportation Showcase Program Submission

Transport Canada's *Urban Transportation Showcase Program* presents a tremendous opportunity for all levels of government to collaborate on innovative and effective strategies to reduce greenhouse gas emissions from urban transportation. The six proposed initiatives of the joint GVRD/GVTA (Greater Vancouver Regional District/Greater Vancouver Transportation Authority) submission illustrate this shared approach with local and regional governments combining efforts to implement an integrated package of strategies that will produce region-wide benefits.

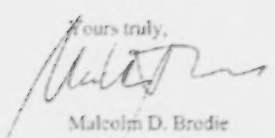
The City of Richmond, a member municipality of the GVRD and GVTA, fully supports all the initiatives identified in the submission and is particularly excited by its potential participation in the program via the implementation of a TravelSmart module in the city. TravelSmart is a household-based trip reduction program that has achieved great success in promoting an increased and sustained use of alternative transportation modes such as walking, cycling and transit. In recognition of the significant potential environmental benefits for Richmond and the region of the TravelSmart initiative, Richmond City Council formalised its commitment to participate in the program by approving the following resolution at its March 24, 2003 meeting:

That the inclusion of a TravelSmart initiative in Richmond as part of the GVRD/GVTA submission to the Federal Government's Urban Transportation Showcase Program, be endorsed.

The City of Richmond therefore strongly urges the Selection Committee to support the choice of the GVRD/GVTA submission for implementation as part of the *Urban Transportation Showcase Program*.

Thank you for your consideration.

Yours truly,


Malcolm D. Brodie
Mayor

pc: Marvin Hunt, Chair - GVRD Board (Fax: 604-451-6614)
Mayor Doug McCallum, Chair - GVTA Board (Fax: 604-453-4626)


RICHMOND
Hand On. So Natural



May 15, 2003

Urban Transportation Showcase Program
Environmental Affairs, Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa ON K1A 0N5

Dear Committee Members,

Better Environmentally Sound Transportation (BEST) is very pleased to be collaborating with TransLink and the GVRD in its submission to Transport Canada's *Urban Transportation Showcase Program* (UTSP). The Vancouver Region "Showcase" proposal represents a comprehensive integrated package of new transit initiatives, pilot projects and land-use improvements; together this innovative package will greatly improve access to, and use of sustainable transportation in the region, and reduce greenhouse gas and other emissions.

822-510
W Hastings St
Vancouver BC
Canada V6B 1L6

This letter represents a commitment from BEST to contribute to the Central Valley Greenway (CVG) – a 22km pathway for cycling and other active transportation modes, and one of six components in the Vancouver Region "Showcase" proposal. Together with local municipal partners (Vancouver, Burnaby and New Westminster), BEST has made considerable efforts to envision the CVG's route and planning. Our Greenway work has been seeded by the inaugural \$1 million VanCity Award, won by BEST in a community vote in the fall of 2001.

T 604 669 2850
F 604 669 2859

Over the next several years, BEST's role in the CVG project will encompass ongoing promotion, programming, stewardship and "value-added" infrastructure on the Greenway – activities not typically within the municipalities' purview. Nonetheless, BEST fully expects to partner and collaborate with regional and local government and other community groups and NGO's, in these Greenway initiatives.

Specifically, BEST's funds will be used to:

- Endow a \$360,000 Greenway Trust for the ongoing stewardship of the Greenway, including programming and promotion;
- Commence a capital campaign aimed at generating a further \$2 million in corporate and community support;
- Fund "value-added" infrastructure (e.g. benches, lighting, plantings, kiosks, signage); and
- Community engagement and liaison: On-site surveys, public art competitions, community design charrettes, sponsored rides, targeted cycling promotion (e.g. for non-typical user groups)

BEST's financial contributions to the Central Valley Greenway will total \$453,000 over the next three years. This total entails \$300,000 in funding for capital amenities and programming, plus \$153,000 of in-kind support.

Participation in the Vancouver Region Showcase proposal is a wonderful opportunity for BEST. Thank you for your consideration.

Sincerely,

Marion Town
Executive Director

best
www.best.bc.ca



Better Environmentally Sound Transportation (B.E.S.T.) is a Canadian non-profit society and registered charity. Our mission statement is the following:

BEST strives to make our communities healthier places to live by promoting sustainable transportation, land-use planning and pedestrian, cycling and transit oriented neighbourhoods.

Better Environmentally Sound Transportation is a successful, dynamic and growing organization. Established in 1991 as a bicycle advocacy group, we have since grown into an integrated voice for all aspects of sustainable transportation. BEST has become the largest community-based, non-governmental organization devoted to the broad range of transportation and land-use issues in Western Canada.

Our education and community activities include:

- trip reduction consultation and education programs for workplaces (*Go Green Choices and Provincial Transportation Demand Management (TDM) Training*); for secondary schools (*off ramp*); for the general public (*Street Reclaiming, Bike Month campaign*); and for combined audiences including transportation and land-use professionals (*National TDM Conference*);
- together with the cities of Vancouver, Burnaby, and New Westminster, and regional planning and transit authorities, BEST is promoting and building a 22km greenway for cyclists, pedestrians, rollerbladers and wheelchair users. In 2001, the Greenway Project was awarded the first ever \$1 million VanCity Award;
- engaging and informing local, regional, provincial and federal government agencies and decision-makers/policy-makers about sustainable transportation alternatives and better land-use planning, and the impact on air pollution, traffic congestion, and energy consumption of various transportation options;
- providing public outreach, marketing and promotional efforts, and working with media outlets to raise awareness, inform and encourage the use of sustainable transportation by the public and employers;
- high profile public events (*Bike Month, Commuter Challenge, Election Candidates Forum, visiting speakers and lectures*); and
- a variety of educational resources including brochures, booklets, a slideshow, interactive workshops, a video and a community toolkit.



UniverCity
THE COMMUNITY AT SIMON FRASER

SFU Community Trust
6086 University Drive
Burnaby, British Columbia
Canada V5A 1J6
tel 604 291 3228
fax 604 291 3181
website UniverCity.ca

April 25, 2003

Urban Transportation Showcase Program
Environmental Affairs, Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa ON K1A 0N5

Dear Selection Committee Members:

Re: GVRD/GVTA Urban Transportation Showcase Program Submission

The SFU Community Trust is pleased to be a part of the joint GVRD/GVTA submission. We are confident that the UniverCity community development at Simon Fraser University presents an excellent opportunity to demonstrate not only an innovative transportation initiative, but also how alternative transportation options can shape the design of new neighbourhoods.

UniverCity is a complete new community being developed by Simon Fraser University on Burnaby Mountain. When completed, it will be home for up to 10,000 residents, along with new shops, offices, schools, community and recreational facilities. This is being planned as a sustainable community, which demonstrates new approaches to protecting the environment, and neighbourhood planning and design. A key objective is to offer residents a variety of transportation choices, resulting in reduced reliance on the private automobile. As a result we are putting in place an extensive pedestrian and cycling path network, a cooperative bike and car sharing program, and reduced parking provisions.

One of the benefits of our community is its relationship to the new Production Way/University Millennium Line Skytrain system. Our community will be connected to the line by a dedicated shuttle bus. We believe this connection to Skytrain will encourage residents to use transit as an alternative to the private automobile. The C-Pass would help reinforce transit use, and help change attitudes towards transit.

As part of the GVRD/GVTA submission, we are proposing a Community Transit Pass program (C-Pass) which would be in place by the time the first residents move into the community. This pass would offer unlimited transit use, at a discounted rate, for residents of the community. The SFU Community Trust, in concert with the developers of the new housing, would promote the transit pass as part of the marketing of the community. This demonstration is feasible since the



Selection Committee Members

April 25, 2003

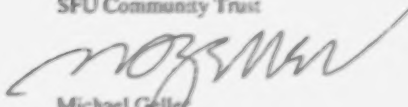
Page 2

university recently approved a Universal Transit Pass program for all of the students, which will come into effect this fall. Your support would allow us to further discount the cost of the pass for the initial residents, as well as undertake an ongoing monitoring and evaluation program to assess its effectiveness, and transferability to other communities.

UniverCity has been conceived by the university as an ongoing research and demonstration program. It already includes numerous environmental innovations in the area of stormwater management, housing design, watercourse protections, to name a few. I am certain that there is tremendous potential for a partnership between the Showcase Program and UniverCity which will highlight our respective initiatives in a manner that will receive national and international attention. Just as importantly, we can help shape more positive consumer attitudes towards transit use, with many further benefits for the environment, and community health.

Thank you for your consideration of this proposal.

Yours sincerely
SFU Community Trust



Michael Gille
President & CEO

jb
03061
c: Johnny Carline, GVRD

APPENDIX B: OTHER LETTERS OF SUPPORT



VANCOUVER 2010
CANDIDATE CITY

March 24, 2003

Urban Transportation Showcase Program
Environmental Affairs, Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa, ON K1A 0N5

Dear Committee Members,

The Vancouver 2010 Bid Corporation is committed to supporting initiatives in the Vancouver region that not only support the objectives of the 2010 Bid, but will also provide long-term and sustainable legacies for the region.

One excellent example is the *Central Valley Greenway*, a 22-kilometre bicycle and pedestrian pathway running through the centre of the Lower Mainland, with its western terminus located at False Creek, right at the doorstep of the proposed Olympic Athlete's Village.

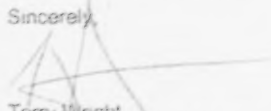
This project first came to our attention through *Better Environmentally Sound Transportation (BEST)*, one of the many community and NGO stakeholders we consulted during the Bid process. In 2001, BEST won the \$1 million VanCity award (through a vote by Credit Union members) for the Greenway project. That in itself is an important signal of the corporate and community support for this wonderful project.

We are further delighted to learn of Transport Canada's commitment to support sustainable transportation initiatives in cities across Canada through the *Urban Transportation Showcase*. The Greenway proposal would clearly make a significant contribution to urban sustainability and environmentally friendly transportation.

Like many others, the 2010 Bid team fully recognizes the public health and environmental benefits of cycling, roller-blading and walking routes in our cities; the city of Whistler is exemplary in this regard. Public trails and pathways in the Vancouver region would, in our view, help create a more active and healthy citizenry – yet another aspect of the Olympic spirit and legacies we like to champion. As well, we believe the Greenway project will provide an important contribution to effective transportation management during the Games, given its proximate location near many important Olympic locations and rapid transit stations.

The 2010 Bid Corporation fully supports this Greenway initiative and strongly encourages the Selection Committee to support the project as part of the *Vancouver Region Showcase* proposal being submitted by the GVRD and TransLink.

Sincerely,


Terry Wright
Vice President, Bid Development

Cc: Ray Straatsma, BEST

Vancouver 2010 Bid Corporation
Suite 100 - 571 West Tower
Vancouver, B.C. Canada V6B 6C8
MAIN: 604.683.2010
TOLL FREE: 1.877.683.2010
FAX: 604.683.2010
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Dave Mowat
Chief Executive Officer

Vancouver City Savings Credit Union
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MAILING ADDRESS: P.O. BOX 2123 STN. TERMINAL
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TELEPHONE: (604) 672-1000 / FAX: (604) 672-6600
EMAIL: dave.mowat@vancity.com

March 12, 2003

Urban Transportation Showcase Program
Environmental Affairs
Transport Canada
300 Sparks St, 18th Fl.
Place de Ville, Tower C
Ottawa, ON
K1A 0N5

Dear Committee Members:

I am pleased to write in support of the Greenway Project of Better Environmentally Sound Transportation (BEST). It is a welcome and enduring legacy for the region which will provide countless invaluable benefits including reducing greenhouse gas emissions and improving air quality in the region.

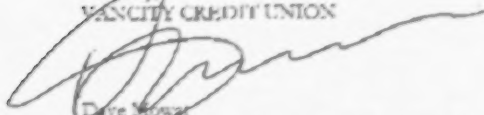
In 2001, BtST and the greenway project received the first ever VanCity Award, VanCity's \$4 million community grant. The grant was awarded following a region-wide vote by our membership and BEST was enthusiastically supported by our members.

The decision by our Board of Directors to place BEST on the ballot followed extensive due diligence with various partners and interested parties over four months. During that process, it became clear to us not only the need for this project in the Lower Mainland region of BC, but also the expertise, professionalism and experience that BEST would bring to the project. This combination of attributes makes BEST uniquely appropriate to take a leading role in the greenway development.

We encourage Transport Canada to join in the many voices in support of this project. The Urban Transportation Showcase Program presents a great opportunity for the federal government to show its support for such important municipal projects that have many regional benefits.

We sincerely hope that the Selection Committee will approve this Greenway Project as part of the GVRD and Translink's larger proposal.

Sincerely,
VANCITY CREDIT UNION



Dave Mowat
Chief Executive Officer and VanCity Member



Printed on 100% recycled paper, some fibres bleached. Printed with vegetable-ink based inks.

**VACC**

www.vacc.bc.ca

VANCOUVER AREA CYCLING COALITIONRoyal City RPO Box 40074
New Westminster, B.C.
V3M 6J7
(604) 663-1093*The Lower Mainland's Cycling Advocates*

Urban Transportation Showcase Program
Environmental Affairs
Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa, ON
K1A 0N5

Dear Committee Members

The Vancouver Area Cycling Coalition (VACC) would like to express its full support of the Central Valley Greenway Project being spearheaded by Better Environmentally Sound Transportation (BEST). We have advocated for this project since the beginning of discussion of The SkyTrain Extension – now the Millennium Line. We were very pleased to learn that BEST had won the inaugural 2001 VanCity award, and are even more excited to find that the project is being considered as a part of the Urban Transportation Showcase Program. Together, these initiatives will go a long way toward turning the Greenway vision into reality.

Cyclists, and more importantly, potential cyclists, need and want safe, quiet routes to cycle on. The Central Valley Greenway is exactly the sort of route that would encourage more people to consider cycling as a mode of transportation. It's a combination of quiet roads and off-road riding that passes through the urban centres of New Westminster, Burnaby, Coquitlam, and East Vancouver, providing a peaceful, safe, comfortable ride for residents of all those communities to and from the central core of Vancouver.

The Greenway will be a welcome and enduring environmental legacy for the region and will provide many invaluable benefits including reducing greenhouse gas emissions and improving air quality.

The Urban Transportation Showcase Program presents a wonderful opportunity for the Federal Government to show its support for important municipal projects, such as the Central Valley Greenway, that have many far-reaching regional benefits. We therefore strongly encourage the Transport Canada selection committee to join the many voices supporting the Central Valley Greenway by supporting the Greenway project as part of the GVRD and TransLink's larger proposal.

Yours truly,

Marion Orser

President

Vancouver Area Cycling Coalition



February 26, 2003

Urban Transportation Showcase Program
Environmental Affairs
Transport Canada
330 Sparks Street, 18th Floor
Place de Ville, Tower C
Ottawa, ON K1A 0N5

Dear Committee Members,

Evergreen supports the Greenway Project of Better Environmentally Sound Transportation (BEST). We are familiar with this project, and, like so many in this region, have been enthusiastic supporters of this initiative since BEST won the \$1 million VanCity award.

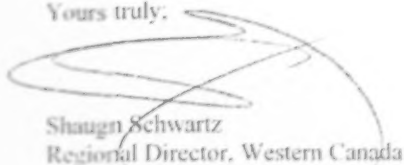
Evergreen is a national non-profit environmental organization with a mandate to bring nature to our cities through naturalization projects. We motivate people to create and sustain healthy, natural outdoor spaces and gives them the practical tools to be successful

We feel that the Greenway will be a welcome and enduring legacy for the region and will provide many invaluable benefits including reducing greenhouse gas emissions, improving air quality, increasing biodiversity and increasing habitat for birds and other creatures.

We encourage Transport Canada to join in the many voices in support of the Greenway and to catalyse its creation. The Urban Transportation Showcase Program presents a great opportunity for the Federal Government to show its support for such important municipal projects that have many regional benefits.

We sincerely hope that the Selection Committee will approve this Greenway project as part of the GVRD and Translink's larger proposal.

Yours truly,

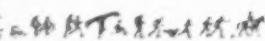


Shaun Schwartz
Regional Director, Western Canada

Bringing Nature to our Cities

Head Office: 715 Adelaide St. West, 5th Floor, Toronto, ON, Canada M5V 1A7 Tel: 416 598-1405 Fax: 416 598-1561
Western Canada: 4404 12th Street SE, Vancouver, BC, Canada V6B 2K4 Tel: 604 683-0788 Fax: 604 683-0322

www.evergreen.ca



Establishing
The Trans Canada Trail in BC

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COQUITLAM BC V3E 1P1
(604) 942-6768
Fax (604) 942-6760
southwest@trailsbc.ca
<http://www.trailsbc.ca>

TRAILS
BC

Southwest Region Council

February 25, 2003

Urban Transportation Showcase Program
Environmental affairs
Transport Canada
330 Sparks Street, 18th floor
Place de Ville, Tower C
Ottawa, ON K1A 0N5

Dear Committee Members:

As a director of Trails BC in charge of establishing the Trans Canada Trail in the southwest region, I had an opportunity to examine in some detail the non-motorized route proposed for the Central Valley Greenway Legacy. Trails BC enthusiastically supports the Central Valley Greenway Legacy project of Better Environmentally Sound Transportation (B.E.S.T.). This is a route that has potential of being the spine of a huge network of trails in Vancouver, Burnaby, Coquitlam, Port Moody, Port Coquitlam, and beyond. The idea that it could become a showcase for other cities and communities is opportune given our prospects of being the host of Winter Olympics. Even without the Olympics, the City of Vancouver being a highly desired tourist destination is an ideal location to showcase the efforts being made by this region to become cyclist and pedestrian friendly and by extension improve the quality of life in the region. Vancouver could become known to be the gateway for cycling and walking adventures.

The greenway will become a vital connection in the region's greenway network. In this instance there will be benefits for both the commuter cyclists and the recreational multi-user of trails. The route itself is a direct and quick link between several jurisdictions including sections in natural settings. This relatively flat route makes excellent connections to existing trails from False Creek to the Brunette River and Burnaby Lake Trail system. It will also connect to both an urban and natural trail system to Burnaby Mountain where a connection can be made with the Trans Canada Trail, offering an excellent loop back to the False Creek area. Eventually it will extend to the PoCo Trail containing the Trans Canada Trail. This meets our goal of creating attractive links in our trail system for the recreational walkers and cyclists. For cyclists, especially, this could become an excellent alternate route for the Trans Canada Trail. We feel that the Greenway will be a welcome and enduring legacy for the region and will provide many enviable benefits - environmental, economic, recreational, educational and social.

Such an initiative will indeed promote alternative modes of transportation and help reduce emissions in this highly urban corridor. We are especially excited to discover that Transport Canada is looking at alternatives to motor vehicles as part of its mandate. We have long believed that Transport Canada could play an important role in accommodating other modes than that of motorized transportation.

Trails BC fully encourages the Selection Committee for the Urban Transportation Showcase Program to approve this Greenway project as part of the GVRD larger proposal.

Yours sincerely,

Léon Lebrun
Southwest Region Director, Trails BC

Non-profit groups vie for \$1 million

BY CHRIS SOERSEN

Four B.C.-based non-profit organizations with a unique vision to improve the community have been shortlisted for the first annual \$1 million VanCity Award, the credit union announced today.

Proposals to build a greenhouse through the Lower Mainland, a youth theatre, a non-profit leadership centre and a sustainability centre were selected from more than 900 submissions that the credit union received since the award was announced in March.

"We were really quite amazed at the response. There was quite a number of really good proposals in there," said Greg McDade, chair of the VanCity board of directors, and member of the selection committee. "There's things to do a project here that will really make a difference."

The four finalists — Better Environmentally Sound Transportation, Green Thumb Theatre for Young People, United Community Services Co-operative and West Coast Environmental Law — were selected by a eight-member group of VanCity board directors, staff, and credit union members.

The winner of the \$1-million award, which will be offered by VanCity every year, will be decided by VanCity's 260,000 members in a September vote.

McDade said the award was created to support innovative and long-lasting community projects.

"VanCity has always been a leader in giving back to the community — we've been giving roughly \$2 million a year in smaller grants — but as we grow, and our profits grow, we felt it's time to do something dramatic and bold."

Better Environmentally Sound Transportation

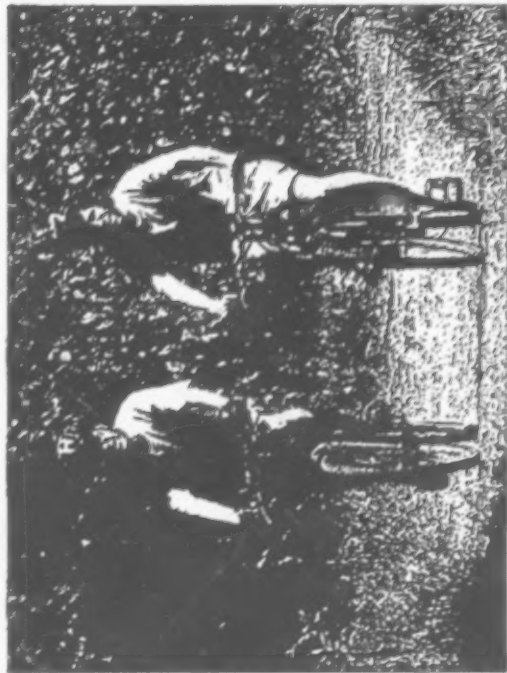
Better Environmentally Sound Transportation is hoping the city's recent transit strike has spurred people to think about transportation alternatives. Such as the organization's proposal to build a greenway through the Lower Mainland.

If chosen, BEST executive director Dave Thompson says the money would be used to construct a 20-kilometre "green" trail that would stretch from New Westminster to Vancouver.

"I think this is something that could appeal to a wide range of people," said Thompson, adding the proposed path could be used for recreational purposes, as well offer an environmentally friendly way to commute through the city.

"Certainly, transportation has been in the news recently, and people are thinking about alternatives."

Described as a "ribbon of green" winding through the communities of the Lower Mainland, Thompson said the project would cost an estimated \$5 million to \$10 million. He



Ray Struckman (left) and Richard Campbell, who are involved with BEST (Better Environmentally Sound Transportation), ride bicycles along a pathway near Still Creek.

said \$1-million VanCity Award would give BEST enough leverage to raise additional funds

organization's efforts to fund a permanent facility to house its outreach activities.

"We're just bursting at the seams here, we don't have enough room."

The Green Thumb Theatre, located in an old house on Venables Street, was founded in 1973 to develop and produce topical Canadian plays for young audiences. It provides outreach services to more than 150,000 children and teenagers every year.

Green Thumb Theatre for Young People

Despite winning several awards for their work creating plays dealing with issues faced by the province's youth, officials with the Green Thumb Theatre for Young People say they desperately need the last 10 years," said Peter Zednik, the general manager of the non-profit theatre, referring to the

as well as establish a leadership centre where various non-profit groups could share expertise in locating capital, fund raising, marketing, and to share technology, strategic planning and human resources.

However, Beachy said that he thinks UCSC — currently composed of 66 separate non-profit organizations — will have a harder time selling its proposal because it is not focused on one easily identifiable issue.

"As an umbrella group, we are especially interested in supporting the whole civil society."

West Coast Environmental Law

After helping to create some of North America's strongest environmental legislation, West Coast Environmental Law is proposing that a state-of-the-art "green building" be built to house various environmental groups, and provide the public with education on environment issues.

"I think our project takes a holistic approach," said Linda Nowlan, executive director of WCEL. "By locating similarly minded people under one roof, we'll have more of an impact."

Nowlan envisions a centre — perhaps located at the Donmar Sak heritage building in False Creek — that would be constructed entirely of environmentally friendly materials, and would use the latest heating and recycling technologies. The sustainability centre would also act as a showcase for sustainable construction practices in B.C. and Canada.

The WCEL, established in 1974, was created to help people participate in forming policies, making decisions about, and protecting the environment. The organization provides free legal advice, advocacy, research and law reform services.

specific social issue in mind, but instead to make existing non-profit organizations more effective.

Tim Beachy, the association's CEO, says if UCSC won the VanCity award it would ultimately benefit a wide range of societies and associations.

"It would be a large boost for what we already do," he said. Beachy said the organization would use the \$1 million to set up a legacy fund to help other non-profit organizations in the future.

accessible to the handicapped. BEST has been planning the project for a number of years.

He added the greenway would be constructed to be from other corporate donors.

United Community Services Co-operative

Unlike the other finalists, the United Community Services Co-operative is not designed with a

Nov. 17,
2001

VANCOUVER SUN EDITORIAL

Corporations lead by example in acts of sharing

The announcement that the first \$1-million VanCity Award will provide seed money for a 25-kilometre bike trail tells us two things.

First, that Vancouver now has a hope of becoming as friendly to cyclists as Calgary and Ottawa are in the summertime.

Second, that the VanCity credit union still knows how to play a real leadership role in our community.

You'd think that Vancouver would be first in the country in providing urban bikeways — for all the obvious social, geographic and climatic reasons. In fact, we've only recently begun to properly accommodate cyclists. Even Toronto has downtown bike lanes, an amenity that Vancouver planners are just getting around to proposing.

The first \$1-million VanCity Award will help to fund an \$8- to \$12-million project developed by the transportation advocacy group BEST (Better Environmentally Sound Transportation). The VanCity Greenway, slated to be completed by 2004, will link Vancouver, Burnaby, New Westminster and Coquitlam with a low-traffic route from the suburbs to the city centre for bikes, rollerbladers, pedestrians and wheelchairs.

Why we've taken so long to properly provide for bicycles as a form of basic transportation is a mystery. Perhaps it's because all our recreational cycling opportunities seemed sufficient. In any event, this project will help to lodge the bicycle firmly in our minds as a basic, viable, alternative form of urban transportation.

The other thing that the award will establish more clearly is the importance of innovative corporate community leadership.

VanCity has always been a leader in its industry, pioneering in Canada many services and perks that we now take for granted no matter where we bank. It has also quietly and substantially supported community projects from nonprofit housing to environmental reclamation.

Its innovative, community-minded approach has also been good business — VanCity has become the largest credit union in the country, with 270,000 members and \$7.3 billion in assets.

This time out, VanCity asked its members to choose the winner of the grant from four alternatives. That unique approach not only makes its customers feel included, it raises the profile of other worthy projects. And by giving the significant sum of \$1 million to a single winner, VanCity raises the bar for other companies that operate in this community.

In the age of "shareholder value," which tempts companies to make decisions that simply deliver prompt results on the stock ticker, we need this kind of leadership.

Some corporations already understand the challenge.

For example, the annual \$50,000 Alcan Performing Arts Award for B.C. artists, a project administered in conjunction with the Vancouver East Cultural Centre, was recently upped to \$60,000 and is the largest award of its kind in the country.

Scotiabank's contribution of the \$1-million site for the new Scotiabank Dance Centre on Granville St. is another example of corporate leadership.

On Friday, Finning International announced that it is giving an 80-per-cent interest in an 18.6-acre parcel of land on Great Northern Way east of False Creek to four B.C. post-secondary institutions. Finning estimates that the gift is worth \$33.8 million.

Size isn't the only thing that matters, though. By way of example we note that a wide variety of individuals and businesses made smaller donations to last year's initial Festival Vancouver showcase of classical music, but collectively those donations added up to \$1 million.

These are all acts of citizenship that should challenge every one of us to ask what we can do for our community. After all, the act of sharing is the thing that make us strongest.

DENNIS L. SKULSKY
President and Publisher

Pacific Newspaper Group Inc.,
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a CanWest company

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SHELLEY FRALIC • Executive Editor
NOREEN RASHBACH • Deputy Managing Editor
DON CAYO • Editorial Page Editor

City reveals plans for green transportation

City hall promotes the Central Valley Greenway, a route for cyclists and pedestrians beside the Lougheed

By John Knox
BURNABY NOW REPORTER

The city is hoping to participate in a nationwide transportation competition which focuses on energy efficient travel and air quality improvements.

The Urban Transportation Showcase program is an initiative of the controversial Kyoto Accord, an international environmental agreement aimed at reducing greenhouse gas emissions.

The GVRD has been chosen as one of 15 urban regions across the country competing for a share of \$35 million in federal funding, which will be used to bring various transit and transportation planning proposals to life — or to enhance or improve projects already in existence.

As such, the city has forwarded three suggestions to the committee responsible for the GVRD's showcase submission to Ottawa, and are now waiting to see if those projects will make the final cut.

The first is the Central Valley Greenway project, a pedestrian- and bike-friendly route which cuts through the heart of the city's busiest traffic corridor.

The eventual plan for the CVG is to link trav-

ellers on foot and bicycle with a safe, efficient and environmentally friendly route connecting False Creek in Vancouver with the Fraser River in New Westminster.

A report by city planner Jack Belhouse states that the greenway "has been a goal for the city of Burnaby for the past quarter of a century."

"The focus of this showcase project, however, will be to capitalize not only on the inherent attractiveness of the CVG as a stand-alone bike and pedestrian route, but also its integration with the regional transit system and municipal bike and pedestrian routes," Belhouse said in his report.

"The opportunity presented by the showcase program is the advancement of the CVG for substantial completion in two years at a third of the cost to the city, instead of likely up to 10 years at full cost."

Another project forwarded to the GVRD from city staff is the establishment and promotion of a "transit village" concept in

Metrotown with increased accessibility to SkyTrain, bike and pedestrian routes.

Belhouse said four key goals of the transit village concept would be to increase access between Metrotown SkyTrain station and:

- ◆ the Metropolis shopping centre;

- ◆ the Maywood residential area;

- ◆ the Grange/Kingsway residential area; and

- ◆ east/west pedestrian and cycling routes.

A third effort known as the Travel Smart Project has been

suggested for the Sperling/Burnaby Lake SkyTrain station.

Based on a similar project in Perth, Australia, TravelSmart is an aggressive marketing campaign aimed at increasing the public's knowledge about transit opportunities near their homes.

In Perth, the tests showed that personal telephone contact with residents can lead to an overall reduction of 14 per cent of auto trips from an area and an increase in walking and cycling, Belhouse said in his report.

"These results can translate into direct, measurable reductions in greenhouse gases."

"These results can translate into direct measurable reductions in greenhouse gases."

Jack Belhouse
BURNABY PLANNER



News Release

For Release: IMMEDIATELY

Date: April 30, 2003

GVRD, TransLink pitch "Showcase" transportation projects for federal funding

— \$10 million from Ottawa could produce \$35 million in improvements

TransLink and the Greater Vancouver Regional District will submit a package of six new transportation projects to Ottawa in a bid for a share of \$40 million in federal funding through the Ministry of Transport's Urban Transportation Showcase. This follows an announcement by Federal Transport Minister David Collette that the Greater Vancouver Region was one of 15 program finalists, selected from 48 submissions from across Canada.

The GVRD TransLink package focuses on new programs that demonstrate innovation in prioritizing reductions in greenhouse gas and other emissions. They include:

Travel Smart -

Travel Smart is a marketing program "targeted" to households that have expressed an interest in trying transportation alternatives to reduce their number of vehicle trips. A success in Germany and Perth, Australia, and recently piloted in Portland, Oregon, the program provides residents in a specific neighbourhood with transit, cycling and walking information that is customized to their specific needs.

The Showcase proposal is to run this program in Kitsilano, the Sperling area in Burnaby, Richmond Centre, South Surrey White Rock, Coquitlam Centre and Delta. Transport Canada and TransLink would share the \$900,000 total cost.

SkyTrain "Transit Villages" -

The transit village concept involves making improvements so that it is easier and safer to walk, cycle or take transit to rapid transit stations. Doing this can involve improving the "urban design" around the stations with such steps as sidewalk improvements, traffic calming, better lighting and signage, more bike lockers and street furniture. Other steps are more complex, such as new local transit services, changes to by-laws or official community plans and bigger infrastructure improvements.

The GVRD TransLink Showcase submission proposes this program for the Surrey Central, Metrotown and Broadway Commercial SkyTrain stations.

In addition, the submission is proposing a "community transit pass" program for UsherCity, a new planned community adjacent to Simon Fraser University. Similar to the Universal Transit Pass programs recently adopted at SFU and UBC, the community transit pass would require all households in the proposed development to purchase a transit pass as part of the purchase price of their unit. This concept has been used successfully in a number of U.S. communities, most notably Boulder, Colorado.

The approximate cost of this project is \$10.2 million, shared between the cities of Vancouver, Surrey and Burnaby, the UsherCity Community Corporation, TransLink and the GVRD.

"Central Valley Greenway" regional bicycle and pedestrian commuter path -

This project focuses on improvements to the Central Valley Greenway, a flat, 22 kilometre long corridor linking Vancouver, Burnaby and New Westminster, considered to be the backbone of the regional cycling network. It joins key residential and employment areas, shopping malls, schools, business parks and downtown Vancouver. It also connects with most SkyTrain Millennium Line stations and 12 other bike routes and trails.

The Central Valley Greenway is the first cycling infrastructure project in Canada to be advanced with significant private sector funding. Better Environmentally Sound Transportation (BEST), received a \$1 million grant from VanCity Savings Credit Union to help build the Greenway. BEST will contribute beyond the 2006 Showcase implementation period.

The total cost of this project will be about \$14.3 million, with funding from Transport Canada, TransLink, the GVRD, BEST, VanCity Credit Union and the cities of Vancouver, Burnaby and New Westminster.

Hybrid Bus Demonstration -

This part of the TransLink/GVRD Showcase submission will examine how new technology in the form of "hybrid" buses can improve transit buses, both in terms of their performance and environmental impact.

Hybrid buses use a small diesel engine to run an electric generator, which supplies an electric motor that in turn powers the bus. These buses can reduce greenhouse gas emissions by about 40 per cent over a standard diesel bus, cut other harmful emissions by 65 to 97 per cent and reduce noise emissions considerably.

TransLink would retrofit two buses that were used to test early prototypes of the Ballard Fuel Cell propulsion system. The \$1.65 million cost would be shared between TransLink and Transport Canada.

Main Street Transit Priority Corridor -

The #3 Main Street/Downtown trolley bus is one of the busiest, most frequent and highest passenger volume routes in the region. Growing traffic congestion along Main Street is slowing this service down and causing buses to "bunch," affecting travel time, operating costs and ridership.

This program proposes changes to the design of Main Street to incorporate more "bus bulges" - extensions of the curb at bus stops and intersections, allowing buses to load and unload passengers without pulling out of traffic. Bulges also make street crossings shorter, reducing the time needed for pedestrian crossing signal phases and thus speeding up the flow of general traffic and buses alike.

Signal priority systems as part of a regional Intelligent Transportation Systems project would allow buses to "hold" green lights at intersections, reducing the number of stops for red lights. Better bus stops with electronic displays similar to those used on the #98 B-Line would be included in the project to make the service more attractive. The Showcase submission includes a plan to market the improved service along the corridor.

This project has a target to improve efficiency by 10 to 15 per cent. The freed-up resources could be used to increase bus service on the corridor by as much as 20 per cent.

Transport Canada, TransLink and the City of Vancouver would co-fund the project, estimated at \$6.4 million.

Study: Goods Movement Efficiency and Greenhouse Gases -

The Greater Vancouver Region's role as Canada's western gateway puts enormous pressure on our roads system to move goods and services to and from our land, sea and airport facilities. Growing traffic congestion increases shipping costs due to time delays and greenhouse gas emissions.

In fact, goods transportation is estimated to account for 35 per cent of these emissions in the region. As such, the purpose of this study would be to uncover ways to improve the efficiency and competitiveness of goods movement in the region while reducing greenhouse gas emissions.

TransLink recently conducted the first major truck freight study in 20 years. The proposed Showcase program would complement that study by enhancing the regional transportation model and helping us better understand goods movement logistics.

The study would analyze how goods movement is affected by policy decisions such as truck-only lanes, major infrastructure developments and land use policies regarding the location of transportation facilities. The research would also examine and evaluate measures to reduce greenhouse gas emissions.

TransLink and Transport Canada would co-fund the \$200,000 cost of this study.

At least four of the 15 Urban Transportation Showcase Program finalists will receive federal funding. The TransLink/GVRD submission is seeking \$10 million from Ottawa, which combined with other provincial and regional funding would generate about \$35 million in improvements.

A detailed proposal will be submitted by May 16 2003 and the Federal Minister of Transportation is expected to announce the winners by July or August. More information on the GVRD/TransLink submission is available at:

http://www.translink.bc.ca/files/transport_files/misc_agenda_min/2003/04_17_03/4.4showcase.pdf

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Transit cash for Coq.?

BY JANIS CLEUGH
THE TRI-CITY NEWS

Residents in Coquitlam Town Centre could soon be part of a national showcase program on how to travel "smart."

TransLink and the Greater Vancouver Regional District will pitch the program to the federal government this month to encourage area homeowners to get out of their cars and onto public transit.

If approved, the pilot program also would be offered in Kitchikano, Burnaby (in the Sperling area), Richmond Centre, south Surrey/White Rock and Delta.

Called TravelSmart, it is one of six "showcase" initiatives proposed for funding from the Ministry of Transport's Urban Transportation Showcase, which promotes the reduction of greenhouse gases.

The federal government will decide this summer whether the TransLink/GVRD bid is successful. It is estimated to cost \$900,000.

TransLink spokesperson Ken Hardie said Coquitlam Town Centre was singled out because it already has good public transit but isn't used to its capacity.

"The idea is that we would send information to residents in the area asking if anyone's interested in alternatives to driving a vehicle," he said. "The ones who say they are get a visit and a [TransLink] person works with them and works around what they need."

Hardie added, "They say, 'Here's the bus stop closest to you and here's how to get everywhere from here.' It's a very customized plan for households."

TravelSmart mirrors programs already in place in Germany, Perth, Australia and Portland, Ore.

The other programs earmarked for the \$10 million in federal cash involve: SkyTrain transit villages; community transit passes; and hybrid bus demonstrations.

Going for the green

Contest might improve route from Sapperton

BY JULIE MACLELLAN
RECORD REPORTER

If you've ever tried walking from Sapperton to the Quay, you'll know it's not the most pedestrian-friendly route - what with the fast-moving traffic, big trucks and constant smell of exhaust.

That could all change, however, if the Greater Vancouver Regional District wins a Transport Canada competition designed to encourage energy-efficient transportation and land use.

The GVRD is one of 15 finalists in the Urban Transportation Showcase program. Its proposal includes a number of projects, including SkyTrain station neighbourhood improvements and the Central Valley Greenway commuter bicycle and pedestrian pathway.

Should the GVRD win, its proposal could get at least \$10 million in federal funding to cover up to one-third of the costs, with the remainder to come from regional and local governments.

If the GVRD proposal wins, planning director Mary Pynenburg said the city may stand to receive some funding to help with its ongoing SkyTrain station area planning.

The idea is to promote

more intensive development around stations, she said, to create a "transit village" concept.

The biggest benefit for New Westminster, however, would be in the new Central Valley Greenway route.

The 22-kilometre pathway links Vancouver, Burnaby and New Westminster, connecting residential areas, schools, shopping malls, business parks and the Vancouver and New Westminster downtowns.

Through New Westminster, it's proposed to connect Hume Park to the new Sapperton Landing Park along the Brunette River corridor. From the end of Sapperton Landing Park, it will connect to the Quay.

Coun. Lorrie Williams, who lives in Sapperton, said it's an excellent idea to have a walking route to the Quay.

"I've tried to walk Columbia Street, and it's just horrid right now," she said.

The issue now is which route to choose. The city is eyeing two possibilities: a streetside route along Columbia to Begbie Street and the Quay, or a waterfront route from Sapperton Landing all the way to the Quay.

Though city staff say the waterfront route is the eventual preferred option, it would be more expensive and less practical at the moment.

Even with one-third federal funding, the streetside route would cost the city about \$280,000. The waterfront route could cost as much as \$400,000, plus \$250,000 for land acquisition.

There are currently four properties on the waterfront on which the city doesn't have a right-of-way.

Coun. Bob Osterman questioned whether the money for either route is available in the city's budget.

APPENDIX D

CENTRAL VALLEY GREENWAY ROUTE SUMMARY

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START/END POINT:

Downtown and False Creek Connections

At its western end, the CVG connects to a central hub of commuter cycling routes and recreational connections at Vancouver's Science World and False Creek. Existing bicycle and pedestrian routes will soon be expanded by significant improvements for downtown cycling and walking, as proposed in Vancouver's Downtown Transportation Plan.

Existing links and routes include:

- The popular Seawall on the south side of False Creek leads directly to Granville Island, west side beaches and parks in Kitsilano and Point Grey;
- Southbound bike routes at Ontario and Heather Streets (the Ontario Bikeway has recently been upgraded with traffic calming, pedestrian improvements and street furniture);
- The downtown Pender Street bike lanes are easily approached from the Greenway/False Creek hub by Columbia, Keefer and Carrall Streets (a proposed westward extension of the Pender bike lanes will connect cyclists to Stanley Park and the North Shore).

Proposed links and routes include:

- The proposed Carrall Street Greenway from the False Creek Seawall to historic Gastown;
- The proposed Helmcken/Comox Greenway from the False Creek Seawall to Stanley Park through a high density neighbourhood (the Showcase proposal includes support for the initial planning phase of the Downtown Helmcken Greenway);
- The proposed Pacific/Expo Boulevard bike lanes which will provide good bike access to the Downtown South neighbourhood and connect to all three False Creek Bridges.

SECTION 1: False Creek Flats

Science World to Clark Drive

Heading east from Science World the CVG moves through the False Creek Flats and the largest remaining rail yard in Vancouver. Designed as a green ribbon through the industrial heartland, this Greenway segment will be a flat, continuous off-street route complete with trees, shrubs, benches and lighting. This industrial site is being redeveloped

into "Vancouver's Technology Centre" with high employment potential and the CVG will provide a vital pedestrian link for employees arriving from both Main and the future Vancouver Community College (VCC) SkyTrain Stations. At the east end of the Flats, the Clark Street Escarpment rises eight metres above the Grandview Cut, a man-made trench with a rail line and Millennium SkyTrain line. At this point, the Greenway will cross over on a Clark Street bridge/overpass, linking travelers with the both VCC SkyTrain station and Clark Street, while providing stunning views of Vancouver's skyline and mountains.

SECTION 2: Grandview Corridor

Clark Drive, Grandview Cut, Slocan Street

From Clark Street, the Greenway follows the north side of the Grandview Cut, parallel to the Grandview Highway North. This "highway" is actually a low-volume arterial running through an inner city, multi-family residential neighbourhood with an elementary school. There are few intersection crossings, and significant route design and traffic calming measures are planned to accommodate multiple users. Greenway cyclists will have a choice of sharing the street with motor vehicles or using a landscaped off-street multi-use path.

Here several innovative measures will be taken to improve the safety, comfort and travel time for commuter cyclists. Commercial truck traffic will be removed from the street and diverters, narrowed streets, medians, and parking reductions are all planned. At least three separate blocks will incorporate "bike streets" - very narrow street sections designated for bicycles only. This section will be well-lit with flat lens metal halide technology, reducing glare while improving visibility and safety. Large spreading street trees will provide shade and help clean the air. A variety of public amenities will be added, including public art spaces, small plazas, resting areas, seating and drinking fountains. This area 'greening' will incorporate over one hectare of native trees, shrubs and groundcover, contributing to improved air quality for residents and cyclists alike.

This segment provides multiple transit and cycling connections: Commercial and Broadway SkyTrain station; several popular bus lines; and the Mosaic, Lakewood and Sunrise bike routes. The busy intersection at Victoria Drive will be mitigated with a painted "bike-box", giving cyclists queuing priority at the light. East of Victoria Bridge, the

Greenway will provide a nearly seamless route to Slocan Street for about 1.7 kilometres. Greenway users here will experience and enjoy a unique linear public space to relax, recreate and travel.

SECTION 3: The Rail Route ***Slocan Street to Boundary Road***

At Slocan Street, the CVG merges into a multi-modal corridor, with the rail to the south and the SkyTrain above. Efforts will be made to find innovative design solutions to best coordinate the merge walk/cycle path with a working rail line and the elevated SkyTrain guideway. This section is relatively continuous, with just three crossings—Renfrew, Rupert, and Boundary Road—which will each get cyclist/pedestrian activated signals. Otherwise, the trail will be off-street, providing a fast, effective and well-lit commuter cyclist connection, in an area with few alternatives for cyclists other than riding on busy arterials.

BURNABY

SECTION 4: Still Creek Route ***Boundary Road, Still Creek Drive, Sperling Avenue***

From Boundary Road, the multi-use path heads along the railway and SkyTrain to Gilmore Avenue. Riders then move briefly through a modern office park and alongside Still Creek, a small Burnaby waterway. A new bridge will be constructed across Still Creek. This Greenway segment will also be enhanced with new opportunities for flora and fauna interpretation through signage and viewing platforms. Further opportunities will be explored for the ongoing habitat restoration along this urban waterway. Riders will experience pleasant and comfortable access to this largely hidden section of Still Creek.

Nearing Willingdon Avenue, the Greenway will merge into the boulevard of Still Creek Drive and connect under the existing roadway overpass. Some property acquisition will be required (if necessary, an interim route along Willingdon would be created). East of Willingdon, riders can visit a charming compost demonstration garden and outdoor learning centre at Burnaby's Municipal Recycling Depot.

Approaching Douglas Road, the Greenway will transition from an off-road, multi-use path to an on-road section through a light-industrial area. Efforts by BEST and other groups will assess and target the potential for the non-motorized travel along this corridor. Further east to Sperling, the Greenway will run along a hydro right of way. This section will demonstrate innovative methods to maximize public use of existing utility corridors; for example,

the hydro line service road may be upgraded alongside the Greenway design. This segment will also include a small bridge over Crab Apple Creek and an overpass at Sperling Avenue over the railway line.

SECTION 5: Winston Road ***Sperling Avenue to Cariboo Road***

This 3.0 km section will place the Greenway on the north side of Winston Street and Government Road. Both roads would be narrowed for a multi-use "Urban Trail" and separated from traffic by a new median, directly transferring road capacity from auto traffic to pedestrians and bicycles – a unique demonstration project along an arterial currently without sidewalks or other pedestrian facilities. Previously slated for four-lane vehicle usage, this new cycle/walk-friendly design would still provide ample room for efficient goods movement. An extensive public and planning process will evaluate various opportunities and constraints along the route.

SECTION 6: Brunette River ***Cariboo Place to Cumberland Street***

This section is subject to an existing agreement between the GVRD and City of Burnaby to link the Burnaby Mountain Urban Trail with an emerging Brunette-Fraser regional pathway. The additional regional connections provided by the CVG will broaden access to a range of trails and pathways extending from this area of Burnaby. A new bridge over the Brunette River and signal crossings designed specifically for pedestrian and cyclists will complete this segment of the Greenway, ensuring safe and comfortable access across North Road into New Westminster and Hume Park.

NEW WESTMINSTER

Section 7: Hume Park ***Hume Park to Braid Station***

Entering New Westminster at Hume Park, a multi-use path will take travelers through the park and along an evolving warehouse district above the banks of the Brunette River. Further east a new multi-use path will be constructed under the Brunette Avenue overpass. Heading to Braid SkyTrain Station (and eastward through the next section) much needed environments for walkers, bladders and cyclists have significant potential to enhance land values and create better access to neighbouring job-rich industrial areas. An alternative low-level route along Brunette River will be explored over the longer term.

SECTION 8: Braid Industrial Way

Braid Street to Cumberland Street

Here the pathway directly connects the Braid and Sapperton SkyTrain stations, currently an area with no pedestrian facilities and limited bicycle amenities. To secure and enhance this connection, on-street bike symbols and directional signage would be employed for the new pathway. Across the Brunette diversion channel, a new pedestrian bridge will be installed on existing footings. As well, new pedestrian walkways will be constructed on road-side boulevards through the Braid Industrial Area along Braid Street and Canfor Avenue through to Spruce Street. From there, a multi-use Greenway path will emerge along the south side of the Brunette River to connect to the new Sapperton Landing Park on the Fraser River. Longer-range opportunities for a full-length Brunette River alignment will be explored with stakeholders and property owners.

SECTION 9: Columbia-New West Quay

Cumberland Street to Columbia Street

Entering the residential and commercial areas of New Westminster from the north, travellers will move onto a multi-use boulevard path on Eas. Columbia Street's north side. This transitional Greenway segment will traverse a rapid transit corridor and a significant redevelopment at a former hospital site. Travellers can link to a bridge crossing to Surrey, and several existing bike and greenway connections in New Westminster.

Moving further into New Westminster's downtown, a significant new street plan will convert two lanes of traffic to bike lanes, centre medians and turn bays, slowing and diverting existing traffic. New pedestrian bike signals, bike lanes and wider sidewalks will be installed along key segments of the route. Supporting amenities (e.g. bike racks) and special surface treatments such as red asphalt bicycle lanes will be introduced. These comfortable, low-cost solutions will improve access between the town centre area and major nearby activity centres. There are also significant opportunities to recognize "Columbia Street History" as part of the redesign.

For this final segment, bike lanes on Columbia and Begbie streets, signalized crossings and wider sidewalks will enhance the vibrant mix of commercial activity and residential uses in downtown New Westminster. Low-cost improvements will make intersection crossings safer, and stronger pedestrian and bicycle connections will be made with the Public Market at Westminster Quay. Again, opportunities for a longer-range alternate route along the Fraser River will be investigated.

ANNEX D

Conflict of interest and post-employment code for former public office holders: Questionnaire

1. Do you presently employ, in your business or establishment, a former public office holder who left the Government of Canada in the last 12 months? *No*
2. Does your business have, as a major shareholder, a former public office holder who left the Government of Canada in the last 12 months? *No*
3. If you have answered yes to question 1 or 2 above, was this person at an EX (Executive) level or above while in public office?
4. If you have answered yes to question 3, please ask that the employee/ shareholder contact his/her former department to obtain written confirmation that he/she is in compliance with the post-employment provision of the Conflict of Interest and Post-Employment Code. Such confirmation must be provided to the Minister prior to the signing of any contribution agreement by Transport Canada officials.



1 May 2003
Stephen Rees
Program Manager, Transport Canada

